## COMPUTERWORLD

#### Oracle Office to throw down the gauntlet to Notes

Groupware blueprint adds image, voice to Oracle DBMS

By Vin S Nach REDWOOD SHORES CALLE

Oracle Corp. plans to disclose blueprints for a groupware product a la Lotus Notes during its annual International Oracle User Group conference later this mooth. The database maker is also expected to unveil several so-called "media server" add-on modules that will let its Oracle database bandle voice, images and full-

motion video, sources said. Not content to let Lotus Development Corp. control a hurgeoning groupware market, Oracle plans to eventually remake Oracle Office into a Notes rival, according to analysts and users familiar with Oracle's

Oracle Office is a set of electronic-mail. scheduling and directory service applica-A groupware version of Oracle Office is expect-

product plans.

ed to be delivered in mid- to late 1994, sources said Lotus and Oracle have discussed linking Notes with the Oracle database, analysis said, but a revamped Oracle Office would put the database maker in competition with Lotus. Oracle, page 24

### IBM Office struggles

Key accounts defect despite new Office Vision initiatives, products

By Johanna Ambrosio

IBM is fighting to keep Office-Vision - its much-delayed and maligned office automation framework - alive even as some key customers are leaving the fold.

For example, IBM's recent introduction of some OfficeVision components that run on local-area networks (see story page 16) has not been enough to stop some large accounts from kissing the whole thing good-bye. Southern California Edison Co., a huge utility in Rosemead, Calif., will by early next year move its 10,000 Office-Vision end users to an as-vet updetermined alternative system.

"Office-Vision just does not meet our long-term direction for client/

20°

40%

server," said David Tommela ger of information tech ogies. He said the utility looked into the IBM LAN offerings but decided to go with another supplier. Whichever environment it of will eventually support 17,000

Despite these detections, Rich ard Sullivan, IBM's director of office and publishing marketing, insisted that "OfficeVision is alive and well and still growing." He claimed the user base is growing by approximately 14% annually but he did not break out what percentage of that figure was new so-OfficeVision installations. Overall,

IBM claims some 5 million end OfficeVision, page 16



#### Looming specter of NT unifying Unix Ry Joan S Boyman

The alignment last week of more than 75 Unix vendors behind a common set of Unix application programming interfaces fired a broadside at an old foe, Microsoft Corp., whose Windows NT operating system is just moving into the early stages of delivery.

However, users and analysts cautioned that the alliance's impact may be lessened by a mid-1994 delivery schedule.

The weapon wielded by the Unix vendors at their New York an-nouncement last week was eco-

nomies (see story page 8). A common set of APIs will reduce the cost of creating packaged Unix applications, making it easier and cheaper for developers such as Lotus Development Corp. sele Corp. to write to the Unix elient/server environment. This is

tical if Unix is to compete with Unix/NT war, page 9 work is to end its relentless backlog problems. And then there is the need to pack more users into a

cheering section currectly weight-

ed more beavily in the analyst

Results from a Computerworld survey of 100 information systems managers last week indicated that

while many users no longer see

a good many have made it only to

neutral ground and are still re-serving judgment.

community.





But don't cheer yet: Female II rs still carn an avers of 15% less than their male ros terparts -- a distinct improv nt over the 21% shortfall post ed last year but still a tell testament to the gender gap.

an average of 3% to 5% this year See page 91.



#### IBM PC Co. wins users: backlog threatens gains

NEWYORK

By Michael Fitzgerald

sociated with the IBM name. But all sides agreed the PC Co. still has As IBM PC Co, marks its first annilots to do before it makes its way versary, analysis and many users hack to the head of the ci

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There is no question that an unshackled IBM PC Co. is serving as an example to the rost of its struggling parent's units. "They've taken a business that was spiraling downward and revitalized it," said Richard Zwetch

PCCo., page 14

#### MEMAG

#Letus resists user pressure for a Notes runtime option but promises improvements in service and application development tools. Page 4

mA new crop of distributed network management products aims to overcome SNMP's limitations in enterprisewide management. Puge 6 mMore than 75 leading Unix vendors unite to

create a common set of application programming interfaces. Fage 8

a Digital makes a bid for wider Alpha support with the introduction of a Pentium-class chip

with the introduction of a Pentium-class chip for \$3,000 to \$4,000 Microsoft Windows NT PCs. Page 10 u Extra! Microsoft begins to act on its promise

to tie a messaging function into Windows. Page 12 a Unable to meet demand for the Thinkpad.

IBM PC Co. announces a new line with a different, and more easily obtainable, screen technology. Page 14

#### DESKTOP COMPUTING

n Apple uses the Macintosh operating system as a lure to build interest in the PowerPC platform. Page 37

#### WORKGROUP COMPUTING

 Oracle finally agrees to support Banyan's Vines network operating system, but not with its latest link product. Page 51

#### **ENTERPRISE NETWORKING**

• Users and vendors agree that Simple Network Management Protocol needs help with enterprise networks. Page 63

#### LARGE SYSTEMS

■Long-awaited commercial applications for massively parallel processor computing finally arrive. Page 71

Enterprise Networking: The Internet is bringing life-saving information to developing nations. Page 63

■ IBM is about to introduce an automated tape library for the AS/490, Page 77

#### APPLICATION DEVELOPMENT

Computer Associates is winning over previously skeptical Clipper uners. Page 81
 MANAGEMENT

#### Salaries are np slightly, according to Computersworld's seventh annual Salary Survey, although largesse more often takes the form of

IN DEPTH

on a little more than 2,000 days we'll flip our
onlendars to the year 2000. Many mission-critical systems may not survive the date change.

#### COMPUTER INDUSTRY

merit bonuses. Page 91

 Control Data Systems celebrates its first year of independence and four profitable quarters. Page 123

#### CADEEDS

a Plexibility is one of the draws of contract programming, but sign up with the wrong broker and you can kiss that benefit goodbye. Some agencies have been criticized for excessively restrictive contracts. Pages 113 and 117

#### MARKETPLACE

Honsehold names they aren't, but tS executives tell us these products are great. Page 126



#### COMMENTARY • RDBMS vendors aren't rush

ing to provide the support for objects that leading-edge companies need, Charles Babcock observes. Page 6

u Editor-in-chief Bill Laberis suggests that the relative improvement in women's pay seen in Computernorle's 1983 Salary Survey may mean downsizing is squeezing out discrimination. Page 32

n Tim Lynch at Florida Power and Light says OOP has its place, but it isn't the miracle advocates would have you believe. Page 33

 Patricia Seybold says you can't have an information-rich organization until you convince people to share. Page 33

 Wait for the simplicity that vendors always promise with the next release, Ellis Booker writes, and opportunity will pass you by. Page 24.

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Editorial/Letters to	the editor	Page 31
Friday Stock Ticke	r	Page 132

#### Executive Briefing

Good news, but... could describe a lot of the news this week, starting with this nugged from our seventh an unal Salary Survey. Clo salaries are climbing alightly after an omnous dip last year. Less encouraging is the consensus that downstizing and streamlining will continue unabated, and ClOs who don't keep up technologically are prime targets. Page 91

tochnology developments: Leading Unix vendors have anmonced their intention to create consistent AFs for Unix client server applications, which could mean lower costs for usors in terms of packaged software as well as training and inAPIs won't appear until the mid die of next year, and it could be two years before customers see real benefits. Pages I and 6

Token Ring users might be hap to hear that an IEEE working group is taking up the issue of how to speed up the Token Ris architecture. FDDt and ATM a quire more speed, but both ental changing hardware and cabling Some observers are concerned, however, that this effort, in which [858 and Protece plan to participate, will produce more confusion than actual benefit. Page 54

Companies that have ventomed into use of SNMP for large-scale network management say they are already plenty confused. No maintenance of the state o

er priocel 2-mail applications of the control of th



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#### News Shorts

#### Microsoft reveals talks about Excel 5.0 of Corp. last week detailed some features that will be in Excel 5.0 this fell, including several Inase agents to automate con rently require multiple keystrokes. Microsoft is trying Sect some of the interest in low-priced versions of Borland International, Inc.'s Quattro Pro spread-

sheet announced late last month [CW, Aug. 30], while seeking to divert Lotus Development Corp. 1-2-3 users from the recently inunched t-2-3 Release 4. Novell patches NetWare 4.X security

nent to the log-in utility for NetWare 4.X. The enpent climinates security vulners nser's name and password could be temporarily swapped to disk when running in a DOS environment with a small memory configuration, Novell said. Earlier NetWare versions require no enhancement. The new file, named login.exe v4.02, is available at no charm from resellers

Cray to release MPP Cray Research, Inc. will unveil on Sept. 27 in Washington. D.C., its long-awaited massively parallel pro-cessor (MPP) system, the T3D, which is based on the Digital Equipment Corp. Alpha chip. Although Cray declined to provide details, the company has said in the past that the first product in its multiphase MPP program would be able to grow to 512 or perhaps 1,024 processors. Taking the performance of a single Alpha and multiplying it by 1,000, this would give a 1,000-pro-cessor TSD a performance of around 150 billion floating-point operations per second. Observers predict the T3D will cost between \$45 million and \$30 million. depending on configuration.

#### Perot president takes leave of absence

Perot Systems Corp. President Pat Horner has taken an indefinite leave. Chairman Morton Meyerson described Horner's leave as a sabbetical and said be does not know when Horner will return or whether be will stay with the company. Meyerson has not named an individual to replace Horner, instead, he has regrouped executive ranks into two teams to separately oversee the U.S. and European operations.

SHORT TAKES Symantee Corp. has agreed to acquire Fifth Generation Systems, Inc., a Baton Rouge, La., utilities noftware maker, in a stock swap worth about \$44 million. The move is subject to government and shareholder approval and is expected to be completed in the next 30 days. . . . Roy Camblis, a former informe ion systems executive and a leading advocate of open client/server computing at Wells Parge & Co., has joined Oracle Corp. as senior vice president and chief mation officer... Compaq Computer Corp. cut prices on some desktop PCs and added the 33-MHz 480SX to its DeskPro/M and ProLinea lines. Pric came on all ProLines 4/25 models and the Desk Pro-4548/25M... Dell Computer Corp. replaced its cur-rent 486/L with the OptiPlex L family, which will start at \$1,278 for a 25-MHa 1486SX-based system with a sitor... Borland said test week that it will ship a Unix version of its dBase IV Version 2.0 database product this fall, and an OpenVMS version in the first quarter of 1994... Legent Corp. has acquired Corporate Microsystems, Inc., a Lebanon, N.H., provider of software distribution and file transfer software for Unix and OS/2 piniforms... Lotus Development Corp. last week launched SmartSuite for OS/2. Unlike nartSuite for Windows, SmartSuite for OS/2 is based on 1-2-3G for OS/2, not Release 4 of 1-2-3.

#### Lotus puts nix on runtime...

By Michael Vizard

Despite pressure from users to deliver a runtime option for Notes which would belp accelerate ac ceptance of the groupware envi ronment, Lotus Development Corp, executives said they intend to stand firm with their existing pricing model,

Currently, Notes is priced at \$495. But users are asking Lotus to deliver a runtime version of Notes that would be priced somewhat

lower ICW, Aug. (6). This runtime version would essentially strip the application development capability from Notes, thereby allowing users to deploy Notes applications at a lower cost Users argue that Lotus would benefit from a pricing model that would encourage companies fordeploy Notes on every desktop in their organizations before rivals such as Microsoft Corp. deliver

#### competitive products

"It's a real controversy. When you start talking about a 1,000-user instellation the cost of the licenses - along with support issues and application development - becomes a barrier" said Joe King,

ine., a Notes application develop-ment firm based in Shrewsbury.

The cost of deploying Notes could be reduced, however, with a ebeaper runtime license that would essentially convert the \$495 version of Notes into a full devel coment license --- a pricing model that mirrors the relational data-

"If I'm a corporate site with 9,000 H censes, all those people are not developing applications. So what I want is a runtime license to make il a lot cheaper to distribute Brownell Chalstrom, president of Chal-

Consulting Inc. in Oakland, Calif "If it was broken down and packaged like that we would deploy a lot more licenses," said Mary Doo York Telephone Co., which already has 1,500 Notes becases at her site and 9.000 licenses installed over-

But Jeff Papows, vice pres of the Notes division, said that company has more to gain from a while there is no technical reason

why Lotus cannot offer a runtime licease for Notes, current busin income make such a more untilled.

> Difficult to track Specifically, Papows claimed Lotus would have no way of monitoring which users have a runtime vs.

a full development license, and Lotas is not prepared at this time to secont a lower-margin higher-wolume pricing model for a product that is still relatively

Users and resellers said they doubt Lotus has the resources on hand to support the widespread automtion of a runtime version of

However as time goes by and network monitoring tools improve, Lotus may be

willing to reconsider its position. He said a runtime license would like spreadsbeet users, may want to develop their own applicati But users and resellers said Lotue is making too much of the endneer development issue, and the

runtime license than it has to lose Cliff Harrington, project manager for Notes at Rockwell International in Anabelm Calif a 900 user

To solve this problem, Lotus now has 50 people working in its Notes Premium service programs, which can be obtained for \$2,500 a year for each Notes administrator or

\$150 per bourly phone call. Lotus also has 12 people wor ing in its Basic support program which is available for \$295 per year for each administrator or \$50 per bourty call (see chart).

Notes support may be picking np, but improvements to its appli cation development environment are moving much slower. Last week at an IBM conference

for OS/2 held in Lake Bneun Vista, Fin. (see story page 20), Lotus Chief Technical Officer John Land ry said Lotus will not release a Visual Basic language tool for Notes, called LotusSeriot, until the time when Notes 4.0 ships next

Notes development tools our rently consist of a set of template

applications created by Lotus that can be modified by and users, a series of @Commands that can be used to modify forms, a Notes macro language and a Notes applica

#### ... but addresses Notes support, service problems

CAMBRIDGE, NAME

Executives at Lotus Development Corp. bast week detailed plans to overcome what are widely seen as the two major shortcomings in its Notes groupware environment: a lack of support services and applieation development tools

This mooth, Lotus will launch its first 24-bour, seven-day-a-week support service for Notes.

We've been looking forward to this service. We need the flexibility because so much of the technical support issues bappen outside of normal business hours," said Mary Dooman, engineering director at New York Telephone Co. The addition of these services is

expected to go a long way toward redeeming Lotus' reputation for poor response time to Noter (poulries fCW, July 121, ft is generally beld that the rapid deployment of Notes exceeded the ability of its support staff to keep page

"Lotus" support for Notes has been up and down like a roller coaster. Things are getting better. but their support people keep getting bired away by resellers," said Joe King, president of Crossroad Partners, Inc., a developer of ous-

Latest Lotus Notes services ers can obtain copy of the tabase that Notes support ectalists use to answer chrical questions. Contains technical questions. Contains all the technical notes, troubleshooting scripts and a

Single point of contact. Provides users with one-on-one relationships with senior Notes technical support lysts who are assigned to ividual accounts.

support. Systems administrators have

tom Notes applications in Shrewshery N.J it's like growing pains. When you find someone at Lotus who is good, you want to hire them," said

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#### Charles Babcock

#### SQL vs. objects



Object-oriented systems are gaining ground in some progressive IS abops, but their use is hampered by the fact that business data resid-ing in relational database systems in not easily available to them. RDBMSs do not support the dation of objects, which means the date ust be kept in two places or clumsily trans

ferred in and out of the relational systems. For several years, relational yendors have been saying not to worry, object support is just er. But as you listen to some re their responses on this question start to sound suspicious. Instead

of getting a time frame for object support, one tends to get a put-down of the young object-oriented DBMSs. In the June 14 issue of Computerworld, expert C. J. Date stated. tional system that implements domains properly would be

able to do all the things that object-oriented advocates claim ob-ject-oriented systems can do . . . "This statement may be true as Jees of the mean of the second Date carried the argument a step further in a July 12 letter to the editor when be said; 'Relational technology does not neces-

to be stored in the database." nal model don't require it, but SQL No, theories about the rela does. Which do you suppose database programmers are huilding

Let's take a look at the SQL problem. In its initial implementa-tion, SQL supported a handfulnf simple data types on which it could carry out its SELECT, JOIN and other operations. When the ard was expanded by the ANSI X3H2 committee in 1962, more splex data types were added, such as date/time, which could be made up of several pieces of data, all stored in a single field. But o'time is still a far cry from the unpredictable, user-defined mix nf data types found in objects.

binary large object, also known as a Blob, which sort of sounds like the real thing but is actually a buby step in the right direction. Blobs tend to be images, long text strings, video or voice stored as a uniform data type in a kind of "binary bucket," in the words of Fred Carter, chief architect at Ingres.

Storing and retrieving Blobs is not the same thing as full-fledged apport of object-class libraries. The database management system can do little with a Blob except put it away and retrieve it. It usually takes an application to seize the data and reconstruct it into an image, etc.

This limitation will give way as the ANSI X3H2 committee adds

object support to the next version of SQL, SQL III may be published in 1995, "but more likely in 1996," says Jim Melton, a Digital database architect who serves as editor for the commit

Oracle is playing an active role before Xilit2 and in committed to including object support in Oracles. Company spokesmen estimate Oracles will be available in early 1986. Informat, a pioneer in the field, also won't wait for the standard to be published before it

But all of this remains somewhat up in the stratosphere. No one knows for sure when any vendor will have object support or how

extensive that support will be. And the ANSI committee must sat if support is to be uniform. ANSI panels have been known in fall be-hind their timetables on less complicated matters than the. To my mind, the interest in object-oriented programming has caught the relational vendors somewhat unawares. Their systems ot be replaced willy-nilly by object-oriented data

tems, and I do not know of any users contemplating doing so. But then again, some users will have to wait two to three years before an ingredient they need is added to their systems.

mark in Communitary confer is technologic additor. His MCI Mail address in ATV, 9793

#### Distributed management: Enterprise network savior?

The upcoming crop of distributed network ment products - some of which will be unveiled this month — could finally provide corporations with the type of platform they need to manage their network installations an-

From IBM, Hewlett-Packard Co., Novell, Inc. and Sun Microsystems, Inc., the next-gener tion platforms. like their prodecessors, are based on Simple Network Management Protocol (SNMP) but are said to use a variety of meth ods to get beyond SNMP's limits-

tions as an enterprise management SNMP's centralized polling architecture tends to overload internetwork bandwidth and is not nearly scatable or flexible enough for many users (see story page 67). And while SNMP Version 2.0 does provide some imports

new features, such as manager-to-manage unications and security, it nonethel retains the basic centralized polling blueprint With the exception of Sun, all yendors' SNMP Version 2.0 delivery plans remain vagun. No vell, for example, is concerned about how to integrate SNMP Version 2.0 security features with its own security, a company spokesman

said (see story below). Rather than relying on SNMP Version 2.0, the upcoming generation of distributed manag ment products will be based on a mix of proprictary protocols and other standards. A key component will be distributed domain manageers that use SNMP and the Remote Network Monitoring (Rmon) protocol to monitor and manage particular subsections or aspects of

he corporate network. Such systems can talk to one another or to a contralized "manager of managers" using el-ther the Common Management Information Protocol (CMIP) or a proprietary protocol. Most will share data via a distributed database management system. The end result is that users will gain a correlated, enterprisewide view of the network via a location-independent con

However, the real challenge for vendors is to support true cross-industry interoperability so omers can mix and match whatever products best perform a particular man-agement function, said Sam Schuler, a principal at The Yankee Group, a research firm in Rosto

"Vendors must recognize that regardless of personal involved any specific network protocol, such as CMIP or SNMP, they will coexist. re, they must interoperate," said John McShane, manager of network manager

system development at DHL Systems, inc Even so, the upcoming product wave may be ust what some major corporations are looking for."We're very interested in a truly distributed natwork management system that allows you in do your polling locally, maybe using SNMP, and then use CMIP across the wide area," said Jim Moorhouse, manager of network man ment strategies at Motorola, inc.

And a growing spate of alliances, coupled with the burgeoning support of industry standards, demonstrates a slow acceptance of what customers are telling their suppliers: No one supplier can do it all when it con

#### The lowdown on upcoming strategies

are taking different alants on provis ment. Their plans are as follows:

Howlett-Packard: • Platform: OpenView for Unix. · Unique features: "Event handler" will col

 Domain managers: Open View for Windows, HP's Rmon-based LAN diagnostic tools and ols: SNMP Version 1.0 and 2.0, CMIP

Rolloth Throughout the next year. on Microsystems: Platform: SunNet Manager.

nNet Manager. res: Object-based "co-optive ent" through distributed appli

ent System (NMS) is in the works. nois: SNMP Version 1.0 and 2.0 and

d: SNMP Version 2.0 next mon next generation in the second half of 1994.

see (Net view/100000)
see features: Distributed domain man-ent products based on SystemView a tion programming interfaces and DMR

View/6000 manages about 32 Ethernet and Unix devices; LAN NetView (intro this fall) manages approximately (00 OS/2 and Tok Ring network devices. Digital Equipment Corp.'s version of NetView/6000, in the rics, will provide management of Digital tems and Microsoft Corp.'s Windows NT: retects: SMMP Version 1.0, CMIP, DME.

th in progress

ique features: NMS on NetWare Londable

ior distributed Rmon-compliant LAN analy-sis; NetWare SNMP agent.

Protects: SNMP, SNMP Version 2.0.



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#### Unix unification charges ahead

#### Users laud plan for common specification, though it may be two years off

By Thomas Hoffman

More than 75 Unix vendors last week outlined a plan that will reduce the effort it ow takes to get an application to run

Users ebeered the idea, but it could be two years before they see the results of this unification tresty And lust as important to some ers is what the Unix providers did not address: systems mans

The unification effort, detailed last week, calls for the vendors to co-develop and implement a sp estion outlining a common set of dication programming interfaces (API) for 40 varieties of Unixsed operating systems, including IBM's AIX, Hewlett-Packard Co.'s HP/UX and Sun Microsys

The common API specification should become available to inde pendent software vendors by mid-19 ft will let developers write a single api cation that is portable across all comp ant Unix system platforms. Today, corpo-rate users and other developers have to oplications to get them to run unerent Unix version, which costs time and money.

"We see this today as a triumph of economie logic," said Peter Cunningham, president of Unix International. Inc. The specification is expected to significantly reduce development time and costs for independent software vendors savings that will ultimately be passed



agram'a jack Cooper feels 'like Rip Fan Winkle' walting for a Unix specification

on to neers. Cunningham estimated that the specification could provide the Unix industry with up to \$150 million in cost ags in the next 12 to 18 months. 'It's a long time coming," said Tom McGowan, corporate vice president and senior systems officer at New York Life Brokerage, which relies on Sun Unix

servers to support its opera tween Kansas City, Mo., and New York. The name of the same is busine software - and being able to run that

software in multiple operating environments," McGowan added

specificatio which includes 1,170 APIs, was selected from 50 Unix applications, including programs from AutoDesk, Inc., Lotus Development Corp. and WordPerfect Corp The APIs, which will address kernel-level interfaces between Unix platforms, are based on industry standards such as the X/Open Co.'s

X/Open

Portability Guide, the System V In terface Definitioo and the Open Software Foundation's Apolication Environment Specification

2% AES + 5VID

The APIs include those used for file system calls, standard 1/O commands, Transmissioo Cootrol Prote

net Protocol and Berkeley Software Dis ioo 4.3 Reno sockets Unix applications will not have to be modified if they comply with the standards used to make up the specification, according to Jeanne M. Baccash, director of Unix System Laboratories, Inc.'s architecture and product planning

"No vendor will get compliance prob hly until the middle of 1995," predicted Paul McGuckin, program director for midrange computer strategies at Gartner Group, Inc. in Santa Clara, Calti

The long timetables drew the ire of sa eral users who have been waiting years for commonality among Unix platforms. "The length of time causes us some concern I feel like Rin Van Winkle posit

> ing for this to happen," said Jack Cooper, chief in formation officer at Joseph E. Seagram & Co. in New York, a large HP Unix server site.

> > res most of the key Unix systems vendors said their versions of the op erating system at ready comply with more than 90% of the draft specifi

Users are al ready looking be-

vond API unification to other issues they would like addressed on a similar global level. These include thorny issues such as the lack of effective systems mana ent and security capabil n most Univ environments today

tems management is som that scares me because we've grown up using very tightly controlled systems. and the tools we've been given for Univ just don't do the job," said Woody Woodard, director of operations and technial services at The Home Depot, Inc.

#### Sybase tool plan threatens Powersoft Open Software Foundation's Dis-

By Kim S. Nash SANFBANCISCO

As detailed last week. Syba Inc.'s delivery schedule for elient server application development tools puts it squarely in competi-tion with Powersoft Corp., one of the database developer's higgest third-party tools suppliers. How ever the fur will not really fly until late 1994, when the hulk of Sybase's promised Mom entum prod

uct line will be out in full force. The Me eatum line is an at empt to tie in Sybase's characterbased APT Workbench with me odern object-oriented tools acquired by Sybase during the past 18 months, such as Gain Technology, Inc.'s Gain Momentum [CW. Aug. 161.

Central to the line is Build Moum, an object-oriented tool set for creating client/server soft ware with a variety of graphical user interfaces

Sybase has historically ence aged third-party suppliers, partieularly Powersoft, to answer uses demand for tools that Sybnes could not supply. As a result, ansuts estimated that 60% to 75% of owernoft's 1,000-site installed se are Sybase SQL Server data-

ne customers.
Now Sybase wants to take back some of that ground, according to Aaron Zornes, a Burlingame Calif.-based analyst at Meta Group, Inc. And its Momentum

wersoft's offerings. They're trying to overcom eir historic inertia in this market with a two-year flight plan, Zornes said. "But two years is a long way to go," he added, refer-

ring to the delivery schedule Sy-

#### Out of looms

The fact that some parts of the blueprint are blurry is also problematic for Sybase. For example, a ository is needed to make the ces of Momentum work together, but no warehouse is in sight. Sybase executives alluded to such a oduct but did not give specifics. Also missing is a firm commitent to standards such as the

tributed Computing Environment (DCE), which users need for managing disparate hardware and aging unperme in a software over far-flung networks, Zorner said Then again Premesoft and others have not pledged support for DCE either

Nevertheless, Sybase is serious about horning in on the evercrowded application development tools market, observers said. That will put pressure on Powersoft. Uniface Corp. and other tool make ers that sell to Sybase users

Although Sybase Chief Execu tive Officer Mark Hoffman said the company's Momentum product amily is not an assault on Powersoft's PowerBuilder line, he acknowledged that Momeotum was designed to compete "bend-to-

head with all tools on the market." Powersoft, meanwhile, has adopted a wait-and-see attitude. 'Our customers aren't likely to shift positions in midstream inst because Sybase is entering the fray," said Tom Herring, vice pres-

ident of marketing and husiness



#### Unix/NT war

CONTINUED FROM PAGE 1

#### the Windows family on the desktop

"For Unix to be a viable desktop in the balance of the 1990s, it must improve application portability," said Tom Wilmutt, a vice president at Aberdeen Group, a Boston market research firm. "[Independent software vendors] can no longer afford, and will not sustain, investments of \$20,000 to \$50,000 per platform per application release."

'f would say it's 90% to do with the economics of the cost of porting," agreed Geoff Morris, president and chief execu-tive officer of X/Open Co., which will test. cortify and "brand" Universal and software packages that support the common APIs. "We've been trying to tackle this issue of creating a wide-scale economy for easily porting a lot of applications to the Unix environment

There is reason for optimism, some Unix advocates said. "We're hoping [the APIs] will work; they will make in-house oment simpler and faster in a multiplatformenterprise," said Alan Fedder, executive director of the 1,200-men Washington, D.C., Area Unix Users

#### Citent side key The battle over common APIs will be

fought on the client side rather than on the server side, where Unix is well-entrenched, industry analysts said. Gartner Group, Inc. analysts put the

1992 worldwide Unix market, including operating systems and hardware, st \$11.6 hillion. That should grow to \$35 htllion by 1987, said Paul McGuckin, program director at Gartner Group's Midrange Computing Strategies Service in Santa Clore Calif

McGuckin predicted the Windows NT server market, including hardware, software and operating system, will be worth \$13 hillion in 1997. Microsoft, meanwhile, said it had no comment on the unified APIc

Some users find a single-system concept - at least on the desktop - appealing. Maintenance and interoperation costs will be lower for consistent APIs in

client/server computing. "The fewer operating systems f have to contend with, the easier it is going to be to train people and to make a seamless environment across the network," said Gene Friedman, vice president of applied technology at The Chase Manhattan

Unix vendors have tried to strengthen their hand by piecing together a Unix deskion through the Common Open Systems Environment process, which began

Donk NA

in March

The first fruits will emergenext month, with a Common Desktop Environment conference. Hewlett-Packard Co., IBM and Sun Microsystems, Inc. have en-

plication Binary Interface. Morris said the new Unix APIs, set to ship by mid-1994, will solve the problem.

domed Sun's Windown competible interface for the deaktop, called Windows Ap"There will inevitably be some tweaking [of code]," he said, "but the coverage will he 100% in many cases. Even if it's 95%, a 5% variation is no big deal."

#### Waiting for change

Some application vend bast week, were less sure

"Anything that can be done [to make improvements] will make me happy, but I don't expect any change in the next 12 months," said Jack Noonan, president

and CEO of SPSS. Inc., a \$39 million statistical analysis software firm in Chicago. "Right now, you have to recompile for each platform, testing every single part of the product, because you don't know where the bugs will show up.

In contrast, Microsoft's NT provides a onsistent, if simplified, environment for graphical user interface (GUI)-based client/server applications. Noonan said. Even if the [Unix] APIs work perfectly so f can recomplie and ship products, I haven't solved the problem of sh information between [GUI-based Unix] applications and the problem of inconsistent recompilers and print servers from system vendors," be said.

Meanwhile, users such as Craig Goldun, chief information officer at Chase Manhattan, said they are pleased We've been looking far ane Unix for years and years," he noted, "and now, because of the threat from Microsoft, all m the Unix vendors are together."



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#### IMPOVATION DATA PROCESSING

#### Digital readying lower-cost Alpha chip

Digital Equipment Corp. will next week introduce a reduced-cost Alpha AXP miessor targeted for use in \$3,000 to \$4,000 PCs running Microsoft Corp.'s Windows NT sources said. Digital is bopthe higher volumes needed to ettract of enflowers sendors to Almha Building a high-volume Alpha PC busi

ess is critical, analysts said, because Digital executives have indicated that the company must sell 4 million to 5 million Alpha chips per year to financially

ory. "They need economies of scale, said Chris Christianuen, an Internation al Data Corp. analyst

Digital also has to increase sales in or der to persuade independent software vendors and other major PC makers in support Alpho, said Linley Gwennap, seport" nemuletter in Sebastonol, Calif.

True low-cost Alpha chips enablis \$2,000 NT PCs are still a year ar two away but systems based on the new DECchip 21066 should have enough af a price performance lead over machines based on Intel Corp.'s Pentium and 486DX2 microprocessors to start generating some ess, Gwennap said

The 21066 is expected to provide performance similar to ar better than the ntium chip for about the same price as a 496DX2, sources said. Pentium-based systems typically sell for \$5,000 or more at this point, analysts said, while 495DX2 nes configured in run NT fall into



the same \$3,000 to \$4,000 price ran thal Digital is eyeing.

Sampling of the 21985 is due to start this quarter, and Digital bas said it plan to release systems based no it in 1984.

etting its sights higher The 21056 will be positioned as an engi

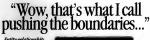
for single-processor PCs running NT. Analysts said Digital is looking for the chip to be more volume-oriented than the priginal DECchip 21064 used in the DECne AXP 150 machine introduced in May as the company's first NT platform (see story page 47).

The AXP 150 starts at \$6,795, and fol w-on models due out this fall based nn a tweaked version of the 21064 are not expected to go much below the \$5,000 level - still too high to hit the sweet spots nf the PC marketplace, users and other in-

The \$3,000 level is the PC mentality. while \$7,000 is the workstation mental ity" poted Steve Russe, MIS manager at Smith Industries Ltd., an aerospace company in Malvern. Pa. "All the corporate burden you have to live with fin get approval for a purchase] changes" as the price increases. "Digital had to go high-end at first to

get attention, but oow they have to turn the whole thing around into a cost-based strategy," Gwennap added.

Andrew Allison, editor of the "RISC lanagement" newsletter in Carmel, Calif, said a fast volume push is important for Alpha because Silicon Graphics, inc. has "a clear cost advantage" now for its ps Technologies, Inc. architecture





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WAN options

#### Frame relay upstages ATM

By Joanie M. Wexle

Companies infatuated with emerging Asynchronous Transfer Mode (ATM) networks could be passing up significant networks exist five ignore maturing frame-relay technology while holding

out for ATM.

"I am amazed that the average communications manager is aktipping framerelay for ATM when we're saving so much with frame relay today," said Jim Fry, director of straiget technologies at PMI Mortgage Insurance Co. in San Prancis-

Other made similar observations in the aftermath of recent nationwide ATM service announcements from Sprint Corp., WilTel and MFS Datanet, Inc. [CW.

Aug. 23 and 30].

A kay reason not to leapfrog frame relay for ATM, they said, is that most firms' wide-area networks today transport primarily data, which is better suited to frame relay, rather than the data; voice/video mix that high-speed ATM is continued to carry.

"We don't need to combine voice, video and data yet," said William Anderson, acnior vice president and natanger of operational services at Seafirst Bank in Seattle. In fact, be questioned the economics of blending voice and data using highspeed, expensive communications gear. Similarly, at Convex Computer Corp., a two-year frame-relay user in Richardson, Texas, "the bulk of our traffic is data, it is not clear that voice, video and data together is a near-term goal," said Coyne Gilbon, a network planner.

Coyne Gibson, a network planner.

Meanwhile, users said frame relay is graving them 10% to 30% over their pri-

Here's hope 
Many companies of the year though considering 
fame relay housest they be under year 
fame relay housest they being as on the city. 
The window of results of exposurely well pass 
which will be the product of the companies 
they command that product consider 
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\*94 14%

Based on surveys with more than one companies
\*Firms with more than one companies
\*Firms with more than so religioner lines in head
\*Firms with rough the first in technique.

vate line networks while upping their network response times. PML a yearlong nationwide frame-relay service, for example, reported a sixfold throughput improvement along with a 10% cost drop recommitted lines.

Other companies cited comparable gains. Gibson said Convex has shaved a third off its WAN costs. Anderson said Seafirst has sliced one second from heat transactions across its

from bank transactions across its 300 branch sites, a one-third response time gain. Other reasons users might con-

sider interim frame relay is because, unlike ATM, it is already widely available, and ATM lessand access prices are fas higher access prices are fas higher reasurable, Sprint's ATM service requires a declared T3 (65M bits see, ) like from a corporate location to the local exchange central notice to local exchange central notice to local exchange compared with about \$4000 per month for frame relay.

"There are not very many conporate pockets deep enough for a dedicated T3 at every one of their locations," Gibson said.

TeleChoice, Inc., a consultancy in Verona, N.J., "absolutely sees a stalling," of multidrop or 56K

hit/sec. private network operators waiting for ATM, said Chris Fim, senior analyst. "They're missing the beat. ATM won't scale down well to the 256K bit/sec. speeds they ared today for their LAN interconnections" because of its associated coverbead.

#### Drerseas us

In addition, it is uncertain when international firms will have ATM available outside the U.S., said Reuben Lantto, director of international telecommunications at Carglii, Inc. in Minneapolis. He said frame relay is "the only thins"

ibat's priced right internationally today." Bough he does view frame relay as an interin step to ATM. He advised users planning to migrate from public frame relay to ATM to stick with the same carrier to alteriate network interoperability headaches.

Not all users share the frame-relay en thusiasm.

"ATM is the future, and frame relay

"ATM is the future, and frame relay, has outlived its unethiness before it's really taken nft," said Doug Spencer, division supervision at the network control center of Commonwealth Edison's Joliet, Ill, network control center. "By the time we'd convert nur communications gear to accept frame relay, ATM would be berre, and we'd have to do it all over again."

On the other hand, "you can wait around for the Holy Grail as long as you want," Anderson said. "But unless you take advantage of what's here today, you'll never more forward."

## Microsoft's Capone sending a message — to Windows apps

and Ed Scannell

Microsoft Corp. Is working on a project that will integrate messaging functions into the next version of Windows, which is expected to be delivered in 1994. The effort could provide users with a cheaper mail engine while helping herosoft to cement workgroup applications to the Windows operating system. Meanwhile, Microsoft archrival Meanwhile, Microsoft archrival

Meanwhile, Microsoft archivial Lotus Development Corp. is in flux with its electronic-mail offerings. Several key CC:Mail employees recently left the company. Separateby, Lotus decided to withdraw the product from its desktop software hundle, called SmartSaite.

While Microsoft trails in its installed base, his moving forward, currently knee-deep in a project code-named "Capone" that necks in integrate meassaging functions into the "Chicago" version of Windows, slated for co-delivery in 1904. Users would reportedly savemoney by not having it to buy a separate mail engine. ing "middle" layer, based an Microonf Application Programming Interface (MAPI), with Chicago. Microsoft wants workgroup computing in which existing Windows applications can use measaging services inherent in the operating system to become "workgroup" applications.

Also, Capone would allow the applications to access back-end directory services and independent messaging transports, such as X-000 and Novell, Inc.'s Messaging Handling Service.

"Our goal is to have the message, ingpiece be a part of the neperating systems rather than an add-on pleece that doesn't always work," and dim Lisiak, a systems engineer at Chevon Information Technology Co., a Microsoft Mail caser and Chevon Information Technology Co., a Microsoft Mail caser and the Thomas, Calif. Tying gramming interfaces and processing the control of the contr

workgroup applications, he said. The plan pits Microsoft against local-area network E-mail kingpin Lotus, which of course has no op-



#### at home

Microsoft, called Utopia, is in the early stages of exploring how to direct the future of computing in the horse. Included in the project is David Thatcher, formeric a crating systems to combine with CC:Mail but is allied with IBM, which has OS/2.

Cepone. "Si a major potential treat is CCMAIL" said bavid Ferris, editor of industry newletter "Ferris E-Mail Analyzer" in San Francisco, While it makes sense architecturally, Microsoft is getting a late start, and CCMAIl has a large and entrenched customer base, he edded.

Mixed meanages Meanwhile, CCMail customers are hoping that Lotus will clarify its intentious for integrating its Notes groupware software and CCMail. States it took over CCMail

in 1991, customers said Letus has been sending mixed signals about its plans. "I'd like help clearing up the confusion over whether I want to use

Notes or CC:Mail for messaging They never really let us know where they were going with each," said Kevin Danehy, senior bush ness systems analyst at Millipore Corp., a chemical filter manufacturer in Bedford, Mass.

Such confusion has impacted CC:Mail internally as well. Last month, Rex Cardinale, CC:Mail vice president and general manager, and several other key players

h left the company. "I left because ni disagreement over the inny-term strategy for CCMail," Cardinale said. He and Lotus nfficials declined further comment. However r a company spokeoman said Lotus

will make announcements in this area at a CC-Mail user conference this month in San Francisco. Lotus meanwhile has pulled CC:Mail from its suite of

bundled products, which are sold at a discount. The company said its customers do not make mail decisions based an bundling deals, but several analysts questioned the wis-

hysts questioned the wisdom of that move because Microsoft has been successful at promoting Microsoft Mail through suites.

Publicity, Lotus officials have stated that the company will comtasted that the company will comtaine to develop back and services for Notes and COMail. The citiest of the company and its as the back-that service for Notes and CO-Mail thouse and CO-Mail thouse company and it is working on an update to the current CO-Mail back-tote of the company and it is working on an update to the current CO-Mail back-tomorphism of the company and the system incl. is as well as the company and in the working on an interest of the company and the company and





When Bob Epstein, Executive Vice President and a founder of Sybase, talks about computing and business, people listen. After years of developing client/server products and talking with customers, he's seen what works,

with customers, he's seen what works, and what doesn't. Hear what he has to say in a remarkably candid recorded conversation. For your copy of "Client/Server And The New Organization," call 1-800-SYBASE-1.

#### PC Co. addresses ThinkPad backlog

Passive-matrix color model expected to shore up line

By Michael Fitzgerold

SOMERS N Y

With sales threatening to slip away bec its inability to meet demand, the IBM PC Co. will try to ease supply problems and stem any defections from its crucial ThinkPad cotebook brand by announcing the ThinkPad 750 line this week, according to sources close to the

While it may sound odd to address supply problems by adding more products, the sources said the company believes it can alleviate back-logs for its worst offender — ThinkPads with ctive-matrix color screens - by offering our tomers a new option: passive-matrix color tech-

Currently, high-end ThinkPads come only in and active-matrix color screens are in short bout the industry [CW; Aug. 9].

Scott Bower, director of marketing for the e computing group at the PC Co., refu to comment oo the unannounced products but ed that the company believes it may

The passive-matrix screen is pretty good, so they may be able to alleviate demand with that," said Andrew M. Sewbold, editor in chief of "The Outlook on Mobile Computing," s

The PC Co. is expected to gloss over supply issues and stress the multimedia orientatioo of the new products, ces said. Analysts and users said the new products eem to have the right stuff ecificationwise

chart), but they want to see the PC Co. actually deliver No new orders

#### 'I'd be interested in seeing it. I'd be interested to see any [ThinkPad] I've ordered," said Jerald S. Noble,

director of telecomm tions and PC support at the American Cancer Society in Aostin, Texas. A call to IBM rect revealed that IBM

and a ball ago, after it had sold out its pla production. IBM will continue to manufacture the 720 series, but "we'll never take another order," a sales representative said Brookdale. Calif., news-

. s.o lb. duel-scan passi

. Pen and keyt 43 hours on money

6.5 lbs., integrated handle, bu dual stereo speakers, CD-ROM

rable 2.88M-byte floppy ble with CDPD cellular i em options

lacts will have a ets will also us Intel Corp.'s 33-M95

Datago distribution subsid-iary, the ThinkPad 720C ed from sixth to eighth place, and the Think Pad 720 fell from fourth to ninth. PC Co. sources confirmed that the backlog trouble has started to cost lowas 5.5 pounds, a e company sales. One analyst said she

est list of bot products from

thought the PC Co.'s strate-

could be a sleeper. "It has

me very compelling capa-

real interest in the market,

amount of people who use

tions," said Janet Cole, an

un Joue, Calif

ties to it and could draw

secially looking at the

rtables for presents

alyst at Dataquest, Inc. in

ComputerLand Corp.'s

the 220, which

has added a variety of

channels, giving people new ways to buy

Still, lower pr

better products and

expanded distribu-

tioo channels have all

belped create borri-

hie backlog prob

left). Por example, No-ble said difficulty in

gotting the IBM PCs

its products.

#### PC Co. wins users

CONTINUED FROM PAGE 1

am, research manager at Internai Data Corp. (IDC) to Framingham.

"They've regained leadership in mar-ket share and in coming out with innovative technology, brand segmentation and

distribution," he said. IDC research pots the PC Co. oo track to garner 12.5% of the market, a 2% gain over 1992, worth as much as \$1.4 billion

Analysts may cheer, but users, thou istic, are cautious. Half of the Cor racorid survey respondents did not put IBM on the abort buy list for PCs; 39% id they are not considering purchasis an IBM computer at all

They are going in the right direction but I still look at Compag as the leader in the PC industry," said Roy Gregory, manager of personal computing at Serivace, Inc., a large food wholesaler in Oklahoma City. Serivner buys from Compaq Comater Corp., the PC Co. and NCR Corp.

Gregory's praise for IBM is tempered what by the fact that he wants a re industry-standard PC Co. Valueint. Almost 10% of the 200 ValuePoints he purchased would not run certain soft. ware programs that his Personal System/2s and other systems will run, he

Little praise

But theo praise of any sort was rurely heard about IBM's PC efforts before it rmed the PC Co. last September. Faced with rapidly dropping market share. ero profitability and alienated customers, osers and analysts viewed the oew entity with skepticism at best.

Besides ending its market share slump and becoming profitable, the PC Co. cov

## No pain, no gain F 10

appears more responsive to englower

I certainly do think they have gotten better, particularly in answering our estions," said Jerald S. Noble, director of telecommunications and PC sopport at the American Cancer Society in Austin, Texas. The American Cancer Society is a true Blue shop with beavy igvestments in PS/2s

Bave reviews Users touted greatly reduced pri

the most significant plus for the PC Co. The ThinkPad potebook line reocarly universal rayes, and the PC Co 's basis oo rapid product devel has brought it back in line with industry

The Valoe Point was cited as IBM's first strong "industry-standard" offering in

In addition, the PC Co, has offered a variety of improvements to service - most ootably toll-free telephone support and a three-year warranty oo PS/2s - and lems, which remains the key gripe for virtually every oper cootacted (see story at

he ordered has beome so serious that he may look at other Meanwhile, the PC Co. will take a stab at easing some of its supply problems on its hot-selling ThinkPad line by releasing

a new model oo Wednesday, according to sources (see story above). Besides the new ThinkPads, the com-pany is expected to tweak continued

over interest with a series of product aninto in the next two mooths Prominent new features will include Peo tium-upgradable PS/2s with Video Elec-tronics Standard Association local-bus graphics and a slew of other features and options (CW, May 31), refreshed Server 85s and 95s, PS/1s that are Pentiom-up gradable and a new ValuePoint seri sat will combine Pentlum with the Pe ripheral Component Interconnect local bus pushed by Intel Corp.

While sources said these announce-nts will not be particularly ootstand-

ing they will demonstrate that the PC Co remains committed to aggressively ap-

#### PC mea culpa

Robert Corrigan, the PC Co.'s pro at, acknowledged the problem b uld not say if the PC Co. will catel

ning." Corrigan said. "We pegg ps (a year ago) for 40% growth, just didn't have the guin to go

#### OS/2 beefed up to take on Windows NT

In a move to boister OS/2 2.1 against pres sure from Microsoft Corp.'s Windows NT, IBM's Personal Software Products (PSP) division last week showed off an early version of its symmetrical multiprocess-

ing technology During the last couple of months, a fhardware makers, including AST Re-

search, Inc., bave shown OS/2 2.1 nerforming four-way symmetrical multiprocessing on servers powered by four 50-MHz Intel Corp. 1486-based proces-

IBM plans to ship the technology, under joint development with Intel, late this year or early next. It will likely be neeloaded on some IRM PC Co. servers, ac-



Lois Dimpfel: PSP remains committed to improving the performance office of

Originally, PSP did oot plan to introduon such genebilli ties into OS/2 until delivery of its microkennel-based version, called Work-

Piace OS, which is not expected until the first half of 1994. But with Microsoft promoting Windows NT's multiprocessing capabilities as an advantage over OS/2 2.1, IBM is going on the offensive.

At IBM's developer conference in Orlando, Fla., last week, Dimpfel said PSP remains committed to improving the performance of OS/22X to run more acceptably on systems with 4M bytes of memo-

She added that IBM can deliver a speedier, 4M-byte version by year's end without sacrificing any major features This will involve technical improvements such as streamlining the operating sys-

tem's memory management. PSP will probably not sell a separate shrink-wrapped version of the improved operating system but will deliver it bundled with IBM and various OEM systems.

Aggressive 1-year-old

The more appressive OS/2 strategy coineides with the IBM PC Co.'s first-year anniversary as a more antonomous unit (see story page t). It has been a good year for both the bardware and software sides of IBM's PC units

The combined reveoue of PSP and its LAN Systems Group, according to some observers, was in the neighborhood of \$500 million. IBM officials would not com-

If true, the combined group would be the fourth-largest micro software company in the U.S. Earnings, however, may he a different story with most believing the operations to be barely profitable during the last year.

marked improvement in PSP's aggressive stance, particularly in the area of Group Technologies, Inc. in Hampton, marketing and merchandising, the latter

particularly through resellers The reorganization PSP west **Sense of direction** rough has made them more visible. To successfully fend off Microsoft, bow-They are getting a lot more shelf space

John Dankle, vice president at Work-

ever, Dunkie and others said PSP mast do

with the rest of IBM's operating systems as well as those being developed outside

IBM by companies such as Taligent.
"Users need to know how to get from point A today to point 8 in 1996 with something like Taligent," Dunkle said.

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**Enart Corporation** ganela significant competitive edge and taken a big-step toward becausing the meat reclassing cally subsected muck exchange in the world. \*\* - Hayne Powler.

or rade the brod architology curve and use industry-standard burdware to

- David Catriple 44 Our 4,700 soms are PC-bonel maltaner 500 systems to imagrate poun of sele and accounting while - Henry Finding

EXTY Sustain record 44 500 was the overwhe favorite" of these intending to standarikar on a single CG cres mentered." - Berld M. Smith

COMSULTANTS

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44 The concern for contents

Darid Langier

eners is that Windows NT has each

maximum implementations of open nature negations and services. \*\*\*

44 While NT will be ported to other

stations, it will probably take a

decade as more of effect to affect the same orginalists to UNIX."

- Peter St. Farked, Comp

Technology Research Corp.

to a recent current of midrator

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Prior Bistoria

44 SCO provides on with a wide

JOURNALISTS

44 SCO has been producing moleover, moleculary open reverse on band stone 1979, and three years of expertence has allowed to to haild loadership or th zero of peoplecule support and

existing genicotions support — Mitch Faguer, Open Systems Fadey, 5/93

UnivErse, Seigns and NewStep SCO UNIX has a pigantic mumber of applications available, evide by the flewe-volume comp of hardware, software and development tools. \*\*

- Qualities & Sqft. PC WHE 493 United the rest of hand . device

detect cuppers seemly lacking fre gustantens compared to SCO. Accommon lactors. the Personal Edition to 2 significantly expelled were of UNES. \*\*

WIND MADE THE

#### News Shorts

#### ludge denies Microsoft's request

A Microsoft Corp. motion against Stac Electronics, Inc. was denied by a U.S. District Court judge last week. Microsoft bad asked the court to enjoin Stac from selling its Stacker 3.1 compression software for Windows and DOS because of alleged patent infringement. The trial is set for Dec. 14.

#### let analyzers make friends

Network General Corp. said lest week it has formed a joint technology and marketing relationship with 3Com Corp. to allow interoperability between 3Com's alter analysis software and Network General's Suiffer protocol analyzer.

#### ata preservers need apply

The deadline for submitting nomination forms for the 1983 Data Preservation Awards has been extended from Sept. 1 to Oct. 15. Co-sponsored by 3M Co. and the Association of Personal Computer User Groups. the awards are simed at reducing the nearly \$4 hillion in productivity losses associated with inadequate backup in the U.S. each year. Nomination furms can be obtained by calling (800) 888-1889

#### Electronic pornography ring cracked

Pederal taw enforcement officials have brought charges against six people in an effort to crack an inernational child pornography ring that has flour-shed using an electronic bulletin board. Department of Justice afficials said the board, known as Bamse, is based in Denmark. Those dialing in can download a variety of child-related pornography in the form of graphic images, text and computer games, said George Burgasser, acting chief of the Justice Department's child exploitation and obsecuity section. More arges may be filed.

#### Optical system charges into stores es in Mason, Ohio, a divind Credit Serv

sion of Federated Department Stores, Inc. in Cincin-nati, will install a \$1.3 million optical character recognition (OCR) system. The company will use the system to process some 150,000 remittance credit-eard payments daily. The OCR system, an Image Remistance System 4500 from Recognition International, Inc. in estem 4500 from Recognition Inte

#### Pieper bids adieu

Novell Inc. announced the late-August departure of Roel Pieper, president and chief executive officer of Unix System Laboratories, Inc., which Novell acsired in July. Pieper had reported to Kanwal Rekhi, well executive vice president and general manager of Novell's new Unix Systems Group, since July. USL usid Pieper made no statement about any new posttion he might take at another company. He joined USL in December 1980, after serving as chief technology officer at Software AG of North America.

SNORT TAKES Micrografts, Inc. will sponsor the Fifth Annual Chili Cook-Off at Comdex Fall in Las Vegas Nov. 16, to benefit the National Center for Missing and Exploited Children. To participate, contact Kate Potts at (214).994-6413. . . A federal court in New York has dismissed remaining trade secret claims Compater Associates International, Inc. had earlier filed in a civil tuwsuit aminst Altal, Inc. . . . Joseph W. Boutureira has been named vice president, informa-tion services at the Jersey City, N.J., office of the American Institute of Certified Public Accountants. He was formerly vice president of operations as the Canadian Imperial Bank of Commerce.

#### IBM Office struggles

CONTINUED FROM PAGE t

weets linked to OfficeVision run. ning on its VM, MVS or OS/400 midrange and mainframe machines in theUS

Still, there is little doubt that OfficeVision is fighting for its life. Most industry watchers dismiss it as yesterday's technology, of little value to anyone outside the installed base. Customers today are looking for broader-based LAN products than what IBM has to of fer, said John Logan, an analyst at Aberdeen Group in Boston "Customers want not just calendar and E-mail but faxing and imaging as

Then, too, the OfficeVision work that IBM unveiled in May 1989 with great fanfare as a way to integrate caleodar, word processing and electronic mail across its major platforms ran into early problems with delays (see time line at right) and has a major

image problem with many neers "OfficeVision is an oxymoron," aid John Wood, vice president at Royal Bank of Canada in Toronto. We never really figured ont what it was." Although still using IRM's mainframe-based Distributed Office System, the hank never switched over to the OfficeVision

#### product line ion ship Adding insult to injury, some large users are leaving the product be-

hind - or are at least considering doing so. The Chase Manhattan Bank NA in New York will migrate its remaining end users off Office-Vision over time, according to Craig Goldman, chief information officer at the bank. Only about 20% of office systems users are still hooked up to OfficeVision running on the hank's MVS-based main frame, he said, and as those users move to PCs, OfficeVision will disappear. Nor will IBM's own LANbased offerings make inroads

here: "Our LAN office software standards are ILotus Develop meet Corp.'s] Notes and CC:Mail." Goldman said

caped IBM's attention. IBM has been reselling both Lotus packages as the core of its OfficeVision LAN product line since June 1982, after discontinuing development of its own troubled LAN offering [CW, June 8, 1992]. Even more recently

the company has in office packages, inclading a workgroup calendar enteways to link the verious I.AN and I popents and a version of its cur-

rent personal information m or that acts as a front end to host OfficeVision systems. Focus: Connectivity
The focus now, Sullivan said, is on

providing connectivity among the different IBM OfficeVision platforms, bringing out new bost versions to keep the installed base happy and introducing more of its own workgroup products for the LAN. He said these will include software for work flow and forms.

IBM is targeting large enterprises that want the LAN environment to work with a mainframe or midrange computer of some sort, primarily those of IBM's own making. The company is working on Universions that will sun on some ers and workstations from other vendors."We're continuing to in vest," Sultivan said. Some 700 ded leated OfficeVision program work out of a Dallas inboratory. in addition, 500 programmers at oth-cr laboratories worldwide also

M announces OfficeVision, its and release of OfficeVision An ISM executive indicates MiceVision will recognize findews and Unix. Window roducts have been deliver Not that this has es-IBM acknowledges more proble with OfficeVision. R will not pro a new date for Release 2.0 but

> IEM announces more OfficeVision LAN products, including a way to coordinate E-mail addresses between the LAN and host. te all the pro has some time. Many large cusners cannot make a switch vet because of their continued reti ance on mainframes. "A lot of the companies that use it really de-pend on it," said Stuart Woodring. an analyst at Forcester Research Inc. in Cambridge, Mass. "That's why they can't just dump Office-Visinn. But over time, as LANs improve the ability to support large numbers of people, more custom-

IBM MIEs the OS/2 LAN v

ers will leave it Typical of this environment is the New York City Computer Service Ceoter, which, according to Assistant Commissioner Alice Geisler, runs its business on OfficeVision. The agency's 800 uskeep in touch with nne another

orbs Dri That might change. The new ling the agency is moving to will be wired for LANs, and Goisley said the agency will look into how to best provide the office services. OfficeVision has served us well. but we have some decisions to make "she sold

#### work on OfficeVision products. A refreshed OfficeVision lineup

IBM's OfficeVision tineup includes the following newer

· Current OfficeVision: A fazz ity of products that runs partially on IBM mainframes, minis and, in part, on Windows-based PCs. Positioned as an OfficeVi-sion front end, among other tacks the products allow users to grab electronic mail from the st, process it on the PC and

been shipping for a year; the OS/400 and MVS versions recently shipped. The product so far counts at least 500 installa-

 Address Book Synch. tion/2: An E-mail address ion program that rong on OS/21. ANs and VM

• Time and Pince/2 for OS/2 and Windows: Provides work group scheduling.

uli LAN Gateway/2: Ex ou E-mail betv veen Lotue ns and three OfficeVision

ware for VM. IBM az other packages, but without very dates: a full text search retrieval package that will w OS/2 and Windows users to Corp.'s Word, DB2/2 and ot

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#### IBM to fortify OS/2 with object frameworks

LAKEBLENAVISTA PLA

IBM last week outlined a strategy for integrating its next generation of object technology into OS/2 as part of an overall campaign to create a robust object-oriented operating system before Microsoft Corp. does.

Products Group's Technical Interchange

here last week, the IBM plan calls for layering a series of object frameworks in place of each of the procedural codebased system services that now make un-

create applications, while giving users an environment where applications are tightly integrated These framework services will be

plugged into IBM's System Object Model (SOM), which was designed to give developers a language-neutral repository for exchanging data between applications

created using different tools. SOM is necessary because each object-oriented language tool available today specifies its own storage format, making interoperahility across tools virtually impossible

"My job right now is to make sure that the tool developers include support for SOM in their tools," said Cliff Reeves, IBM program director for object-oriented technology. "In the end, you're going to see a sea of objects," be added.

Thus far, IBM has delivered a persistence framework for SOM, which is responsible for storing objects and searching for them, and a replication framework, which makes it possible for objects to show date

In the fourth quarter of this year, IBM will add on top of OS/2 a two-dimensional graphies framework and a collection of minor procedural services that have

been developed by Tuligent [CW, July 26]. Other Toligent frameworks that will be dolinandin 1994 for OS 2 include a three dimensional graphics framework a text framework and an internationalization framework that will help translate data

Meanwhile, Roeves said IBM is continuing to build an infrastructure for these object frameworks. Later this month, IBM will deliver its Distributed SOM (DSOM), which will allow objects to be exchanged across platforms. IBM is working to extend DSOM out to Application System/400 and MVS systems.

#### Battle lines But whether IBM can leverage its object

models on OS/2, which is a widely used application development platform, into a commercial success against Microsoft remains to be seen. Microsoft is layering its own object model, called the Object Linking and Embedding (OLE) 2.0 interface, on top of Windows and is positioning its Windows NT system as an application development platform for huilding OLE 2.0 applications

However, OLE is confined to Windows environments, while DSOM is supported by Apple Computer, Inc. and a variety of

"SOM is considered to be a dechnologically better solution that is superior in terms of openness," said Curt Monash, editor of the "Moassh Newsletter" in

New York "People are pretty excited about SOM because it provides language independence," added Nonh Ross, chief techn

ogy officer at Cap Gemini Sogeti USA in New York Ross said he received an SOM tool kit a couple of weeks ago and is looking for-

ward to a DSOM tool kit later this month. "Right now, most people are develo ing applications for single systems, but in the future, being able to have a crossplatform tool that works across process-

es will be pretty important," Ross said. He said DSOM creates an objectoriented environment under which infornation systems chiefs can easily create dication development teams.

"DSOM will make it easier to manage application development projects by im-plementing a standard that makes reusability of objects a reality," Ross said.

Detailed at IBM's Personal Software platform on which they can more easily

When completed, this operating system should provide developers with a

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#### Oracle throws down gauntlet to Notes

CONTINUED FROM PAGE 1

sele declined to comment on the talks but acknowledged that groupware is

"We expect to have a complementary roduct [to Notes], and there will be competitive features as well," said Larry Stevens, vice president of office automation

oducts. Stevens declined to comment

on product specifics. Neverthelees, Oracle Office groupware has piqued user interest. "I'm in-trigued," said Gary Falsken, manager of network operations and strategy at Wells Pargo Bank in San Francisco, who has talked with Oracle about the product. The bank plans to test an imaging ap-

plication for signature verification on rate data housed in SQL date checks. An Oracle database and inte-grated applications capable of adeptly moving such dense data open up the possibility of going bankwide with the use of

imaging and video, Falsken said. Moreover, groupware access to a SQL database one-ups Notes, according to Ron Creswell, head of a Lotus special interest group within IOUG. Otherwise happy Notes users have griped about the ations of being cut off from corpo-

as those from Oracle, IBM and Sybase, Inc. [CW, Aug. 16]. Lotus is building driv ers to some SQL databases.

Further, IOUG attendees ca see demonstrations of several database servers targeted at various media, such as images, voice and video.

The products grew out of Oracle's partnership with US West and other telecommunications firms for building cable and wireless networks to provide video and other New Age consumer services on

Oracle is ahead of other database mak-ers with its planned multimedia support, "but it's not like the company can step in and dominate," said Boh Kim, an analyst at S.G. Warburg & Co. in New York

For example, a potential gitch in Oracle's plans for a multimedia groupware product is making the system

Step sheed easy enough worker" Oracle plans to build nevigate it, Kim "Being vi-

sionary is good, but so is being practical," added. Meanwhile. Media Server is

term for several modules that cater to different aspects of multimedia.

such as full-movideo. voice processing and imaging. The prodnets, which Oracle will demonstrate at IOUG, are being tested at a handful of

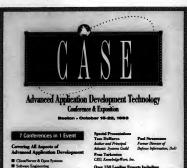
corporate and telecom sites, said Chief Executive Officer Larry Pilipon A US West pilot in the works, for exam ple, delivers video E-mail to several thou

sand homes. Video on demand will be added to the test bed early next year, an Oracle executive said. Delivery of Media Server is expected in

phases starting next month with Media Library, a tool for managing and tracking material that passes through the server. By the end of the year, compact disc quality sound and 30 frame/sec. video is expected, Ellison said.

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#### USDA sows plan to overhaul systems

Common architecture would benefit farmers dealing with multiple agencies

WARRINGTON D.C.

inder pressure from vocal critics, the U.S. Department of Agriculture (USDA) is expected to announce a plan this month to re-engineer its business prosystems services for the nation's farm-

haul many of its key computer systems, rewriting proprietary applications to run nn a nationwide opeo sys-tems network by 1996 (see

story below). The vehicle for this re-en gineering project is the USDA's Info Share project, ich will guide the agency's move from multiple proprietary computer systems to a flexible and open comter architecture. Desp e scope and need for the project, the agency gave no timate of expected say

an Okay, director of the USDA's Office of Informa-tion Resources Management, said the program, which is getting under way this year, will lead to producity gains through in ed automation as well as cost savings through the sination of redundant

cessing. In March, USDA IS me ers met in Baltimore to begin mapping the move to open systems, Unix file servers and the increased use of shrink-wrapped software.

"There are going to be common, shared applications that will serve the same clients," said Gerry Krosbas, comanager of the Info Share re-engineering program here. "That currently doesn't exist [here at the ageocy]." Some 45,000 end users will be affe

by the computer systems overhaul, he said. Specifically, the Infn Share progra will involve six of the largest of the US-DA's 40-plus agencies: the Soil Conservation Service, the Agricultural Stabilization and Conservation Service (ASCS),

the Farmers Home Adminis tration, Federal Crop Insurance Corp., the Rural Development Administration and the USDA's Extension Ser-

One of the project's chief goals, according to Okay, is to establish common data bases supported by a common data dictionary. A key nefit is that farmers who deal with several USDA agencies will be able to see one automated data input that will be viewed, in some eases, from their own PCs,

That would replace redundant forms filled out at multiple local offices, as is now the case. 'Today, information is shared by handing paper back and forth "

Until now, users have logged on to mainframes at the USDA's National Computer Center in Kansas City. Mn., and from dumb terminais in regional and branch offices. Worse yet, farmers have to drive long distances to get to those USDA agency

offices to obtain services. Some farmers fear that a pending USDA reorganization will consolidate branch offices and lengthen travel time.

the North Dakota Farmer's Union board of directors in N.D., said farm ers' bust questions or tion That slows

USDA's John Okay: dictionary

farmers' inquiries. "It bas to go up through the state to Washington [D.C.] and back," Dublen said. "This is something that could be simplified in a lot of cases.

ers need to be updated, farmers said

Ronald Dahlen, a farmer who serves nn

problems aften

get bumped np

ASCS offices to

other levels of

the organiza-

ing spare parts

scarce and interoperability

The move to

open systems

will begin with

a nationwide

Protocol (TCP/

tems Network

local

The fundamental problem is that USDA agencies use separate systems, many of which are not capable of sharin data. Another

nr older, mak-Control Protocol/internet IP) to the existing IBM Sys-

However, the exact specifications of the USDA's new systems may not be ironed out for a year. Standards compiance will be a key factor in deciding which computer products in include, among them support for Posix, TCP/IP and the International Standards Organization's Open Systems Interworking standards, Krosbus said. Unix systems are being considered but may and be used for all applications. IS core USDA said.



Farmers will dial in from their home PCs

fall for potential vendors. It is already setting up a TCP/ IP network that with its SNA network.

Prior to spe

cifie product

Share, USDA in

planning on in-

conference this

problem is that Both networking pro the same front-end processors in the thousands of aging USDA Kansas City computer room. computers are seven years old

Next spring, a pilot test of the TCP/IP sys. tem will link counties throughout Kentucky with the Kansas City data center and with the USDA's Washington, D.C., headquarters, Kroshus said. Ultimately, client/server com likely to play a large role in connecting

rural LISDA offices with central site data the addition of "I see a lot of farmers sitting in their home with a PC and dialing into our sys-tems," said Henry A. Bauer, director at the National Computer Center's office of information resources management in Kansas City. "I believe Secretary [of Agriculture Mike) Espy has made it very clear that we're going to do business dif rently and that it will be more user-

#### Gore's government review will harvest Info Share



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#### Justice for all

And now for some good news.

While women in IS still earn less than men in similar roles, the pay gap between the genders is definitely narrowing. In fact, according to our seventh annual salary survey (see story page 91).

the gap is parrowing rather smartly. One analyst generously attributed this trend to the

Clipton administration's emphasis on female and minority hiring. I suppose we could credit Citaton for the nice weather we've had this summer as well. But the salary levels we sampled were likely set before the new administration could have had any impact on them. So there must be another reason

I think the reason is that the drum-tight job market in this era of downsizing is working in favor of the best employees. Put simply, when management is pruning the corporate parties, what's left behind usually is the strong growth - regardless of race, gender, etc. That is, there is less and less roo

for discrimination in a world ere only the best will sur-

Some discrepancies in pay do persist, including some big ones in the upper salary reach es. But that may have more to do with the actual years of experience on the job gained by the average woman than with discrimination. That experi-

ence gap, too, will evaporate in time. Other interesting if not encouraging trends are ging from the data. Managers are finding much more innovative and ultimately fairer ways of comsting IS professionals. Over time, the percentag of salary increases attributed to annual merit raises is shrinking in proportion to the increases given in bo nus awards. Bonuses in most organizations are tied to superior performance. Too bad we don't compensate teachers the same way.

So in all, some pretty sneouraging news from this, rebensive survey of 18 professionals' salaries.

#### Star search

For 20 years, the Boston Red Sox had the greatest pure hitter in baseball. Despite the presence of Ted Wiltiams in the lineup, however, the team itself seldom finished better than third place.

Which brings up an immutable fact of organizational life. There is no substitute for teamwork. In recognition of this truism, Computerscorid is searching for candidates to honor in our second annual Re-engipeering Team of the Year Award.

Rather than seeking out any one individual glory the entire team. For further instructions on how to nominate or be nominated for this award, watch for the promotion we'll be running starting next week. Or call Alian E. Alter or Joe Maglitta here for details. The deadline for submitting nominations is Oct. 15.



Bill Laboris, Editor in chief



#### Information Age

#### SQL Server secure

Regarding "Security lapse be devils users of SQL Server" ICW. Aug. 23: Contrary to the impres sion conveyed, there is no lapse it SQL Server security that reduces data safety. Rather, the problem that Kevin Kenedic at Houston Lighting and Power Co. describes is one of management: the difficulty of administering multiple serv ers as needs expand beyond work group and departmental use. This issue is not unique to SQL Server. Microsoft und owtonds this is sue well. Every one of the 30,000plus OS/2 SQL Server installati are deployed in client/server con

That is why in our current suite of products for the Windows NT operating system we have tackled this problem directly by buildi specific enhancements into SQL Server to case the administration and management of large-scale client/server networks.

I speat time with the writer explaining these enhancements in our product, but they were not discussed in the story. This is uni tunate because the reader is left with a very misleading impression of our products and our response to this important custon quirement.

Gary Voth Microsoft Corp. Redmond. Wash.

#### Notes supporter

In your Ang. 16 issue, I was quoted as advocating that Lotus release a much cheaper runtime version of tion. While this is essentially accurate, my quote was taken out of context I was at a user group meeting at Groupware '93 in San Jose, Calif., and I made the com ments in the form of a question to enge Lotus Notes ex As someone who has been working with Notes since the summer of 1990 I want to point out that I think Notes is worth every penny Lotus charges, and given the vast resources Lotus has spent develop ing it, the price it charges is more than fair. However, Lotus Notes. like the telephone, E-mail or fax ine, increases in value proportionately to the number of ers, and I fear Lotus will lose a chance to make Notes the de facto ard by using an econ model that works better for refrigen then noftware

I believe that it would be better or companies to have pricing that encourages them to install Notes on every desktop as soon as possi Me than pricing that encourages them to run expensive, time-conenming analyses.

> Conntem Countitie Weischer San Pranetsco



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#### Object orientation isn't salvation

Tim Lynch



as its proponents would have you believe.
The usual line is that it will take time, n bly even years, for an individual to fully greep OOP. Some, we are told, just aren't capable of understanding it at all and should be fired. I'm

unsurfamming in at all and should be fired. I'm not quite user how this lack of ability can be detected, but I have my suspicions about what the "superti" will say, Several articles I've soon recently have mentioned that the first few programs developed with OOP may look somewhat like structured programs. (hope so!)
Who are they trying to kid? If it takes a go-inter to handle this stift, then the unstantial us to handle this stuff, then the vendors ight as well back off and stop hawking it now ause there is a shortage of Ph.D.s clamor-

ngto pound out code. What we have here are marketors to by some self-promoting programmers) trying to self mystery and hope to ClOs who are under pressure to cut costs using technology.

Show me a business system developed usi OOP that does not look like a system develop ng some structured techniques, and I'll we you a business system that Einstein using some structured tech uld not maintain.

Show no nitinitain.

Show no inheritance, and I'll show you a
Copy Lib member, an Include and a program
template. Show me a modular system developed using OOP, and I'll show you a common
Cobol linkage program that is called by 100 difrent programs to properly formet a Social urity number. Show me a client/eerver a lion rows of data on-line ad hoc, and I'll sho

Sure some of the new stuff is great, but it is of mature and should not be portrayed as the best and only way to go. Don't buy the line th

you a network crac

programmers can't under stand this wonderful new technology. We can under stand it all right, we ju don't think it's the Secon

Co and previously worked at Electronic Data Syste

#### Data-hording habit dies hard

ADVENTURES IN INFORMATION by Patricia B. Seybold

ou want an inform anization. You want information wing cleanly from your ountomer nowing cleanly from your customers' customers to your suppliers' suppli-ers and circulating throughout to stimulate ideas and action and deliv-er timely feedback.

Cobol have been the easiest to maintain after

tooo; nave been the easiest to mannath aster the contract development team has left. C++ is great if you want to creats code that only you can maintain. Using it makes for job security (which, these days, is probably not a

bad idea), but it is a step back toward the as-

sembly innguage at a time when we in IS should be moving toward higher-level languages. (The visual development tools that are coming on

the market are a step in the right direction.)

I have experienced OOP technology at a high level through classes, books and sessioars and at the application level using a visual develop-ment tool. I know what I'm talking about when I say OOP is nowhere near as difficult to grasp

Worthy goal, but how do you manage to achieve it? You can't have a completely open door policy or valuable, proprietary information will leak out. You can't force different departments to share hard-won data and carefully analyzed information. Yet, natil the

curporate culture changes ing to one of information sharing, your efforts to streamline processes, improve cu satisfaction and cut time to market will be

The popular approach is to gather all the data from different departments and corral it into one megalithic repository, where it can be carefully maintained and protected. Then, the idea is, everyone in the company can dip into it according to their station and their "need to know." The gateways to and from customers and suppliers are carefully monitored.

lem is, this model doesn't work. Info mation flows in, but it is passed through a screening process before it's allowed to com-mingle. And information flows out, but only in a careful trickle after raging internal debates

Strategic technology plan ers are now favoring some

ng one developer has beed the "maitre d' aptain custody of the data and oversee its distribution. My application requests services from your database and, depending on my application's ion in life and what quid pro quo I'm willing fer, I'll get the level of information service

to come, r is get the level of information service befitting my stature.

It's pretty straightforward stuff. If you want people to share information, you have to offer them information that's more valuable than what they're "qiving up." But the logic sart al-ways so clear to those you have to convince, whose judgment may be clouded by ingrained and unexamined assumptions about "bow we

Let me give you an example: The distribution

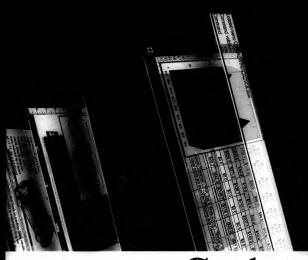
division of a large manufacturing firm had ee tablished a state-of-the-art, just-in-time inventory management system with one of its largest clients. In gratitude, this client, a major

sikes for each store. When the folia is the manufacturer's product marketing department board that offer they began to sulvais, flicking about what they could do with this treasure trove of delicity and the state of the sulvais of the state of the stat

You see the problem. That kind of knee-je response may seem ri

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> - Baird White, Spalding's CIO and Worldwide Director of MIS

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HEWLETT

# Apple baits PowerPC with Mac license

High-ranking officials at Apple Compa er, Inc. said they hope to build enthusinum for the uncoming PowerPC microcessor platform by licensing the Macintosh operating system to other PC makers interested in using the chip in

new models, sources close to the company have indi-Apple officials have re

portedly offered System 7 to hardware vendors interested in developing PowerPC-based computers that would run System 7 and Macintosh applications. Popular IBM PC clone makers Gateway 2000, Inc. and Dell Comput er Corp. reportedly top the tist, but officials from both

firms declined to confirm those reports Until now, Apple officials have indicated that other vendors will be able to run ptosh software only in an emulation window under the PowerOpen Unix environment, which is expected to be available by mid-1994.

If the licensing overture reaches a first movement, it could break nearly a decade of keeping the Macintosh operating system proprietary. Such a move would represent a fundamental shifting of mars for the company where even two have been branded heretical Eartier this year, reports also

that Apple engineers are experiment with a modified version of System 7.1 that old run on DOS-based much intel Corp.'s 1496 microprocessor.

Analysts said Apple could walk on a siender ledge with the licensing scheme cellent method of building montum. "A good analogo would be the wars between VHS and the beta videotape format in the 1980s," sa Pleter Hartsook, editor of Macintosh-centric newsletter "The Hartsook Letter" in Alameds, Calif. "Sony's bets de-

sign was a technole perior product, but it didn't stand the onslaught of compa-nies like JVC. Philips and RCA. PowerPC may be a technologically superior product, but people have to see that the momentum is there." The strategy could backfire, however if Apple continues to be plagued by a

such as Deli has an ample supply of Sys-Apple is expected to ship its first Pow erPC Maciatosh by the middle of next year, Clones with System 7 installed ould follow perhaps six or nine month later "so Apple could get a leg up," one

purchasing non-Apple PowerPCs equipped with System 7. Some, recogniz-ing that hardware has become a commodity item, said they would appreciate any effort to lower the traditionally high-

er cost of the Macintosh. "No one has ever bought a Macin st because there is a little Apple on the de of the box; you buy it for the op erating system," said Bob Anderson, a nior analyst at A. O. Smith Automotive Products Co. In Milwaukee, His com is an all-Macintosh shop with about 400 chipes in the main office and 200 to 250 more spread throughout the country extform more attractive to third-party tware developers. Anderson added

Process problems? But reservations remain among some

end users, who wonder whethsuch a half-breed system could present operational diffi Part of the marie of the Mac in that you have the hardware and software so tightly linked," said ve Lustig, manager of techs services at Bose Corp. in Framing

Apple has been able to tightly ple the [operating system] with the hardware, but when you se a system, you lose that control," said Tim Yeacy, a nnit man ger at Southern California Ediworks with more than 2,500 Macinto es, added, "Look at the con rms when you run some soft on different DOS machi

The PowerPC chip is a coll fort of Apple, IBM and Motorols, Inc. and is based on the reduced instruction set computing technology. The chip desi basis for their next generation of de top computers. Apple Chairman John Sculley said that all Macintosh comput ers will eventually use PowerPC chips in stead of the Motoroia 65000 chips the

tris 610, 650 and Quadra 500 will be up gradable to the PowerPC piatform. Low end machines and the PowerBook are meeted to make the transition in late 1994 or early 1995.



# Microsoft adds support to ODBC By Michael Vizard

source said.

REDNOND, WARR

Microsoft Corp. is readying another version of its Open Database Connectivity (ODBC) inter face, which forms the heart of its SQL-based elient/server computing strategy ODBC is Microsoft's implementation of the

SQL Access Groop standard, which is intended to provide a common SQL interface for accessases from multiple vendors. The new release promises sopport for the

Win32 programming interface used to create applications on Windows NT, the ability for all drivers to scroll backward and forward through a database and, most important, could support for both relational and navigational databases, according to a company spokes ft will be made available in beta-test form

during a developer's conference this month in Seattle

By adding full support for navigational databases, the new version of ODBC will put date ses such as Microsoft's PoxPro and Borland

pal, Inc.'s dBase IV on an equal footing with SQL databases in terms of supporting SQL calls from PC applications

The support for pavigational date oded to negate any support Borland may be able to drum up for its rival database sta the Independent Database Application Pro gramming interface (IDAPI).

Led by Borland, Lotus Dev IBM and Novell, Inc., the IDAPI initiative v sunched last year in response to Microsoft's ODBC effort and promised to provide a common interface to both SQL databases and naviga-tional databases such as disase IV.

crosoft has championed ODBC as the prima-

ry interface it will use to link its applications to latabases. It recently delivered one version of the interface. But thus far, ODBC has drawn oriticism for introducing yet another layer of software that reduces performance. Borland, meanwhile, has yet to deliver a full IDAPI speci-

"The consensus out there is that you have to

trade off performance and functionality to not ODBC and adding support for navigational bases builds onto an already shaky premise," said Rich Finkeistein, president of Perforre Computing, Inc. in Chicago. Still, he added that ODBC is somewhat useful in applications that generate simple SQL calls.

For example, American Airlines in Dallas lans to use ODBC to link some custom-built Viual Basic applications with a variety of dataes. "The applications aren't heavy users of stabases, and it's ensier to support one pico of code to link to multiple databases," said Jay Perguson, a senior engineer at the airline.

According to Colleen Lambert, product man ger for ODBC, Microsoft's SQL impl ion has received something of a hum rap "ODBC was first implemented in Visual Bas and Access, which have separate overbead in sues that create a lot of connections. The only time there is a performance issue with ODBC is when your application has a lot of conand disconnections," Lambert said.

As such, developers of transaction-orig polications are expected to support the native interfaces to databases from vendors such as Oracle Corp. and Sybase, Inc., while using ODBC and IDAPI as secondary interfa provide access to data that is infrequently ac-



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# Digital develops notebook line

Digital Equipment Corp. may be moving away from the "pot-invented-here" syndrome, as evidenced by the company's ent decision to drop its network man-

software. But that does not apply to notebook PCs. where the opposite is hap-

pening. Currently reliant on AST Research, Inc. for notebooks, Digital's PC unit wants to do its own thing in an effort to expand its limit-ed presence in the notebook market. A notebook line is being developed internally to debut in the first half of

With profit margins be-coming more and more ranor thin, Jesse Parker, direc tor of product man at the PC unit, said Digital hopes to make more money by cutting out - or at least reducing its reliance on - the middleman. "Whenever you do it yourself, it's more profitable," he noted.

Digital also acknowledged it must be-come more of a force at the notebook levet to meet its goal of becoming one of the Top 5 PC vendors by mid-1995. "We're nitted to being a full-line supplier, and we recognize the need to have high-volume notebook predicts."Parker said. Digital, which brought its deaktop PC

production back in-house a year ago, reportedly due by the ead of 1993, and some products from AST in the future.

of the notebooks being developed at Digital, but analysts said they expect the systems to be based on Intel Corp.'s 1486 rocessors. Digital's notebook of ring is now topped by a 25-MHz 386SL-

based machine unveiled tast January. Richard Zwetchken haum, a PC hardware ana Picking up speed lyst at International Date Corp. in Framingha Digital, which took a Mass., said Digital's move to make its own notebooks is year to refresh its DECpc LP desistop line.

not surprising. "For them to participate in the fastestowing part of the PC mar-Neal Hill, an analyst at Forrester Research, Inc. in Cambridge, Mass., added that Robert Palmer, Digital's president and chief ex-

ecutive officer, recently sin-

gled out mobile computing

and multimedia as the only two areas where the compagy still funds pure research. Both analysts said they would not unt out Digital's chances of making a go of it in notebooks, despite the comp ny's late start. "I think they can be viable." Zwetchkenbaum said. "If there's

anything that marks the notebook industry it's not brand lovalty. Bob Cloninger, data processing man-ager at OK Industries, Inc., a poultry prosor and longtime Digital customer in Fort Smith, Ark,, said he has not seen "any compelling reason" to hay Digital PCs beyond the handful of desktop ma

chines he purchased last year. wever, he added that he would not be adverse to at least trying out the promised notebooks. "I'm always open towhat Digital is doing," he said. "They've done me pretty good stuff for me in the past, on to think they won't

# Anticipating low demand

# Comshare spreadsheet debuts

By Michael Vizard

Comshare, Inc. has launched a mult dimensional modeling spreadsheet for Windows that marries the traditional ers the ability to model large data sets.

Called Commander Prism, the Com share offering is a Windows follow-on to the company's existing mal

al DOS product, One-Up. However, Commander Prism ly larger data sets, provides a more rebust set of analysis tools using the Windown interface and colculations

features, Kraft General Foods, a subsidiary of Philip Morris Cos. intends to migrate from One-Up to Commander Prism,

cording to K. C. Madden, a business consultant at the company's Rye Brook, N.Y. beadquarters.

Improveeeds improve According to Madden, Kraft evaluated Commander Prism against the Impro multidimensional spreadsbeet for Wir dows from Lotus Development Corp. but found that Improv was not robust enough tomoet Kraft's needs.

"For our applications, Improv's a toy," Madden said. For example, Madden said

his users need to be abte to look at date sets that span as many as 70 husiness

units, 80 product categories and 25 line Improv, Madden said, is not large enough to support these kinds of data sets, and traditional apreadabeets will

not do the job because of limited multidi-'Improv can't deal with models th are higger than available memory, and with traditional spreadsheets all you can



Commander Prism lets users save up to 32,000 views of date

really do is print out the basics, and then everybody has to build a new spread sheet every time they want to see a dif-ferent view. The Comshare products have a far superior way of deing this be-cause it slices, dices and indexes the model using the database, "Madden said.

Specifically, Commander Prism alton users to predefine and save up to \$2,000 different views of data. Commander Prism requires 4M bytes of random-access memory and costs

# Zenith Data boosts notebook features By Michael Fitzgerald

SCFFALOGROVE.ILL.

Zenith Data Systems added st els to its line of Z-Note notebooks and brought out four new versions of its 2-Lite subnotebook The refreshed pro-

Z-Note +. Zenith Data added a new point-ing device, Notepoint, which is attached to the front and center of the notebook, and a version of its port replicator with built-in Token Rine.

All the new Z-Notes use either a 25-MHz or 33-MHz 1486SL from Intel Corp. a 200M-byte hard drive and 4M bytes of ry, except the Z-Note 433LNC+, which will ship with SM bytes of standard RAM

Two models have a thin-film transistor ctive-matrix color screen, two use a DualBrits passive-matrix color screen. and two have monochrome ser-es range from \$2,569 to \$4,599

The new Z-Lite 425L submote maintain their 3.9-pound weight but use the 3.5V version of the 25-MHz 496SL in ce of the 80386SL in the original. Zenith Data said the low-power chip will exd battery life up to six hours. The Z-Lite has a back-lit, 8%-in. screen and will have up to a 170M-byte hard drive. It also uses Litepoint, a device that attaches to the front and center of the key-

425LNo Model 200 425LNCo Model 200	4000L 75-000 4005L 35-000	all lates all lates	people bytes people bytes	Schewatte calor	\$5,00			
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Dan Hendricks and Mark Mroz in Consumer information Management at AT&T are part of a 1000 strong programming staff in Piscataway.

"A typical fix to a program, maybe a quick edit and compile or something, could easily take you half a day on the mainframe," says Mroz.

They began using the Micro Focus Offloading Solutions two years ago and found "everything we could do on the mainframe we could do with Micro Focus COBOL" The PC is so much faster There are still times when I have to go back to the mainframe, but I really do not like it. I try and steer clear of it, if possible."

"With Micro Focus on the PC, I can put my code together in half the time. Using Animator, I As mainframe programmers, they both know can test it out thoroughly and make sure I'm

All within a couple of hours," says Hendricks

With a 70% cut in MVS development costs. everyone at AT&T can share their enthusiasm. "100 per cent of our development is now on the PC with Micro Focus."

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MICRO FOCUS

# Compaq joins consumer market

By Michael Fitzgerald

Compaq Computer Corp.'s first forny into the consumer PC hardware market was followed last week by AST Research, Inc.'s expansioo of its own consumer

Compaq, which analysts said was the last of the major PC vendors to enter the consumer market, introduced two mod-els of its new Presario family, which will sell through superstores and retailers.

The Presario family includes the Pre-

ario 425, which features a CPU integrat ed with a 14-in. Super VGA monitor. The \$1,390 machine is based on Intel Corp.'s 25-MHz 1496SX. The Presario 425 includes a built-in telephone answering machine and fax/modem and uses only one power-cord. Compaq also released the \$1,290 Presario 633, with a 33-MHz 6SX processor from Intel.

Analysts said Compag's mov home market

WAS DOCCESSARY for its cor the

has to broader their reach to keep growing. and they're big they should be able to pay attentioo to each of their markets," said Eric Lewis, an ana-

lyst at International Data Corp.'s Mountain View, Calif., office. Lewis said Compag occided to expand its line to compete more effectively with veodors such as AST or IBM PC Co. Compaq promised more Presario modding minitowers, by year's end. AST, meanwhile, beefed up its Advan-

age coosumer line, adding a multim PC, minitowers and color notebooks to the product line. The Advantage Adventure will feature built-in CD-ROM drives. local-bus graphics, a 16-bit stereo sound card and speakers. It will come in a 33minitower model with the 33/86-MHz

COMPUTERWORLD

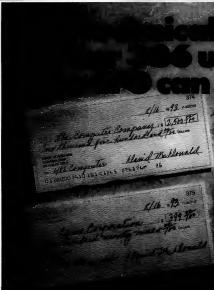
486DX2, selling for a base price of \$1,899 AST also released its Explorer notebook line, which includes a me versioo as well as a \$2,690 dual-scan passive-matrix color version and a \$3,699 active-matrix color version. The systems are based on Intel's 25-MHz 496SX.

AST will offer the Advantage Plus, a 'green' minitower with six slots and six bays, up to 2M bytes of video ran dom-access memory and AST's hardware/software local-bus graphics implementation. The

Plus will be 486-based but Profium adable Prices start at \$1 900 AST will also sell the Advan Prodesktop starting at \$1,199 with a 25-MHz 486SX, a 170M-byte hard drive and local-bus graphics. AST will offer 33-MHz 486SX and DX models and a 33/68-MHz DX2.



Presarie becomes Compaq's consumer entry



## **Desktop Computing**

Lucid Corp. has introduced the Lucid 3-D for Windows spreadsheet. The product provides true three-dimensional spreadsheet modeling with unlimited linked layers and offers cell tting capabilities that include colors, fonts, borders and numeric and alignment options. Features such as drag and drop editing, multidimension al spreadsheets, direct linking to pain tops and more than 140 functions with add-in function packs are also included. Lucid 3-D for Windows costs \$129.95. ► Lucid

Swite 450 101 W. Renner Road Richardson, Texas 75082 (214) 994-8100

Hewlett-Packard Co. has announced Release 2.0 of Dashboard for Windows, an upgrade to its push-button utility pan el for Windows.

etfor Windows.

Twenty-five enhancements and fea-tures have been added to this version in-cluding snap-off tool bars, a DOS com-mand line, quick-launch buttons, sizing options, custom colors, oustom fonts, hot

we and hot mouse elicks nd for Windows Paleage 2 0 is

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mega Corp. has ann Plus, a 1.3G-byte mafor Macintosh and IBM-o

speed text and image database storage; as a high-speed backup alternative to tape; for data archival; and for high-ca-pacity on-line storage.

According to the company, the product offers an average seek time of 19 msec, latency at 6.25 msec, 2.2M bytes per second sustained read and 1.1M byte per second sustained write. It provides me-

dia with a 30-year life expectancy.

LaserSafe Plus costs \$4,995. The 1.3Gbyte disk costs \$289.

Central Point Software, Inc. has an-nounced Central Point Backup Version

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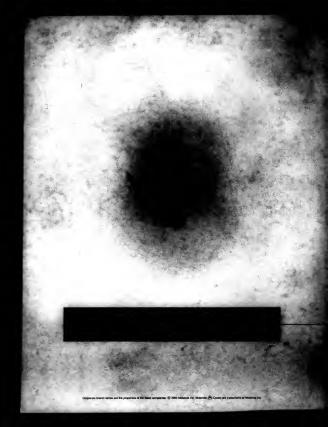
#### **Product shorts**

8.0 for DOS and Central Point Backup Version 2.0 for Windows. Both feature da ta encryption, expanded virus prot tion, tape tools, file viewers and retry op tions for busy files. Cost: \$129.95 cs Central Point Software, Beaverton, Ore (503) 690-8088. . . . Commax To ories. Inc. has introduced Smarth 9%-in., active-matrix, color notebook that employs Intel Corp.'s 1485 pr Smartbook's display can connect to an external monitor Cost: \$4,631. Com Technologies, San Jose, Calif. (408) 435 5000 . . . Intuit, Inc. has introduced Quicken 4 for Macintosh, an apprade to its personal and small business finance software. Features such as au transaction entry, investment tracking and financial planning calculators are included. Cost: \$59.95. Intuit, Menlo Park, Celif. (415) 322-0573. . . . ToumWorks Technologies, Inc. has introduced PaperBridge for Access, document image management software optimized for Mi crosoft Corp.'s Access relational data base management system for Windo The add-on product permits Access da-tabases to include images of paper docu-ments. Cost: \$245. TeamWorks Technol-



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# 🚳 Digital's DECpc AXP 150:

# High reliability, ease of use provide users with strong value for dollar

#### DECDC AXP 150

Computerworld's Firing Line is an evaluation based on interviews wit major users at corporate and educational installations. The product under evaluation is being used in live application environments.

- Evaluators of Digital Equipment Corp.'s DECpc AXP 150 reduced instruction set computing workstation said it provides very high value and reliability in a desktop system running Microsoft Corp.'s Windows NT.
- The evaluators said they were not overly impressed with Digital's levels of technical support and documentation and that the system would cost slightly more to support at their organizations compared with other desktop systems.

beta testing, the DECpe AXP (Alpha) platform - reportedly the fastest processor on the market has a bealthy number of evaluators in industry, government and

Many, of course, are longtime Digital shoos." Others are simply looking for a high-powered deak top workstation that will run their current DOS/Windows applications. The AXP is positioned as a ster, reasonably priced substi-

Currently in the final stages of tote to latel Corp. 1486-based and Pentium desktop PCs. For this evaluation. Computer.

world surveyed four technical the DECpc AXP 150 for two to nine s. The evaluators include a product manager from a software company; the group leader from a research laboratory; an information systems manager from a major stock exchange; and a computer systems analyst from a federal

All of the evaluators had posiions of the DECpc AXP 150, with purchase plans ranging from three to 150 or more units in the next year (see chart below). The evaluators had done exter

sive compatibility testing of current DOS/Windows applications used in their organizations. In addition, each evaluator had at least one in-house application that was destined for migration to Microsoft Corp.'s Windows NT operating system running on the DECpe AXF 150. They said the performance of the machine was dramatically better than that of a comparably equipped 1488 or Pentium machine

running the same operating system and applications. The typical configuration of the evaluation machines was 32M bytes of random-access memory, a 0.5G- to 1G-byte hard disk and Digital's 600M-byte CD-ROM drive. The stock exchange evalu said most systems would be con-

figured with 64M bytes of memory The format for this evaluation was prepared with the assista of Howard Rubin Associates and Technology Investment Strategies

DECpc AXP 150 provided flawless urdware reliability. None had expeed a single hardware fail ure. The software company evaluator said the current

version of the DECoc firm ware required additional fine-tuning. He expected a nber of design shortcom ings to be resolved during the next few weeks.

#### Compatibility Three of the four eva said the compatibility of

Windows NT with the system was a high priority They said they expected that many packaged appli-entions would be ported to the new operating system during the next few months. The stock exchange eval-nator said he expected that

at least two specialized have to be run in DOS/Win

dows emulation mode for the next year or so. None said they had run

The federal agency eval said he was concerned that his preferred C compiler and debug-gers would not be designed to work specifically with the Alpha

some of our [in-house] Windo software, and that worked really well. It ran significantly better." Research lab: "There were two

[DOS/Windows] applications that didn't run. One required a memory Federal agency: "I haven't found an application that won't run un-der NT, including relatively uncon-ventional code."

The evaluators were prohibited by

their Digital beta-test agrees from running formal perform www.r. all bad an inte DECpc AXP t50, page 49

# MIXED UNIX, DOS/WINDOWS EASE OF USE. (DesnyMS

# MANAGRATATION TO THE PROPERTY OF THE PARTY O

al Data Corporation), the installed base of internet-working devices has been growing at an average annual rate of over 65% for the past four years.

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- UDP and IP support SNMP.
- Learn how test equipment that supports the Remote Monitoring (RMON) MIB can assist with distributed LAN management.
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# **Evaluators said high scores**

# flawed by deficient technical support, documentation

sense of its perform workstations, generally 1486 machines running at 33 and 50 MHz. The stock exchange evaluator had used an

sated "worst-case user" scenario to determine whether the machine would meet formal requirements (trader workstations must die three times the worst-case scenario). The DECpc AXP 150 "worked fine," he said. Software company: "It performs quite well, and you can see noticeable improvements com-

pared to similar applications running on Intel Stock exchange: "It ran substantially faster

than 1486 machines), and we expect it will run faster with the new C compiler." Research lab: "If you run in [DOS/Windows] emulation mode, performance is about the same as a 486. If you recompile [for Windows

NT], it's substantially faster. Federal agency: "This machine is running [DOS/Windows applications] through the X86 compatibility module and still has better performance than my 486."

Technical support None of the evaluators required extensive technical support from Digital. The research lab relied on in-house support staff, and the stock exchange had turned to the CompaServe bulletin board system to ask other DECoc users for

Federal agency: "I have fundamental questions about who's going to support NT. Digital's answer is, 'No one really knows.' That's in negotiation right now. And I want to know who's going to develop applications and support this

#### Ease of installation

The evaluators were interested primarily in the installation of Windows NT on the DECpc rare. None reported any problems installing the operating system from CD-ROM The software company — with an extensive interest in OpenVMS operating system support

- said the steps required to perform firmware apdates needed improvement because an accidal interruption in the apdate routine could

Stock exchange: "It was a little more in volved than I expected. It wouldn't connect to

The familiar graphical interface of the Windows NT operating system would leave internal support costs fairly stable, the evaluators said. Only the stock exchange evaluator anticipated a sizable increase in support costs. However, he attributed this to a massive migration from Digital terminals to desktop workstations.

The evaluators said the DECpc system would be very easy for users to master, given its reliance on the Windows NT interface and the portability of Windows applications.

The software company evaluator said that switching to and from the Digital OpenVMS and

Windows NT operating problem. He attributed this to the state of the

AXP 150 firmware and said he expected the pro-cedure would be imved by Digital prior to final system release. "[Ease of use is good]

mostly because of NT, not because of anything special Digital has done." exchange

Since we've off-loaded the central systems from handling our terminals, we can provide a lot of added-value features without it costing anything on the central systems."

Pederal agency: "NT is Windows, with the ex-

ception of administration and security. I'd call It the fastest I've ever learned a new operating Range of services

#### Most DECpc services and utilities derive from

Windows NT. The software company evaluator said that the AXP 150 version of Windows NT had slightly better utilities than those included in Intel versions of the operating system

Software company: "You can find other sys tems with RISC processors, but they run [a sin-

gle) operating system."

Stock exchange: "The operating system is a lot more robust, so we can check for resources

#### and we can warn users when a machine is about to die

ligital poeds to expand the availability of DECpc documentation. Of the four evalua three were not aware of the range of user and technical manuals. The evaluators were also unhappy with the CD-ROM delivery of Windows

NT documentation. Printing it was a nuls Stock exchange: "It was awful. I asked for Alpha documentation and got a program

There was no documentation with the compiler. None what soever"

> of the [Windows NT] docntation is on-line. and I'm not comfortable with it. They expect you to print it, and I don't have three days to print manuals-worth of doc-

The "developer's configura-or" of the DECpc AXP 150 is about \$1,200 more expensive than a comparably equipped 486 system running at 65 MHz. The evaluators said they thought this was a reasonable premium given the speed and performance of the ma-

Software company: "It is \$1,200 more than a comparably equipped DECpc 466ST [with a 66-

Stock exchange: "The Intel [1485] machines ere costing about \$5,000, and these will be in

the \$6,500 range." Research lab: "The price is comparable to a [Sun Microsystems, Inc.] IPX workstation, which is pretty good. It's reasonable."

Federal agency: "If I had to price a Penti schine with the same configuration, I don't aink I could touch it for [\$7,000]."

The value of the DECpc AXP 150 is very high, the evaluators said. They noted they were im-NT and its ability to run almost all standard

DOS/Windows applications.

Research lab: "We'll have to see how (the ECpc systems) pan out. Performance is better

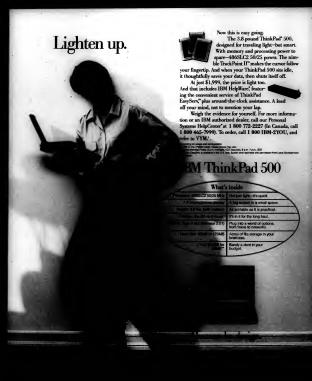
than a SPARC IPX. Federal agency: "I can't find a machine with this kind of performance, for this kind of mon-

Written by senior editor Garry Ray

# Digital responds

Third-party software support: The Alpha AXP running Windows NT has re-





# Federal mediators opt to side with LANs

WASHINGTON D.

People at the Federal Mediation and Concilia tion Service (FMCS) may be masters at the art of compromise, but the tiny agency has declared a take-no-prisoners war against its information systems costs. The victim will be the service's mainframe computer, due to be

wheeled out and not replaced next

The demise of the mainframe at FMCS marks a rapid progression in IS at the agency, which just a decade are had no computers of any kind. In 1983, Richard P. Scivetti, director of automated services. was brought in to automate the records and procedures by which the agency tracked labor agreements, mediated labor-may ment disputes and acted as the middleman in helping companies and unions avoid strikes.

The agency was drown: per, Scivetti said, with the forms sent in by company me and unions overflowing from offices into the

throom and hallways. FMCS maintains detailed biographies on some 1,750 professional arbitrators around the country, and it sends lists of suggested arbitrators to companies and unions in response to their requests for help in labor disputes. Gen-

dispute would take FMCS seven to 10 days using the paper files.

PMCS bought a used IBM 4341, automat the arbitration system and reduced that time to less than a day. Scivetti also brought in the Adabas databas

nansgement system and the Natural fourth generation language from Software AG of

Now that vision is paying off. The 1988 five-year plan anticipated that by 1983, the mainme - by 1988 an IBM 4581, also bought used - would have to be replaced by another mainframe or by "some sort of LAN arrang Scivetti said. Ultimately, a squeezed bu tated clien/server.

FMCS has now completed the first phase of its move to distributed computing, having de-

veloped a procurement system for an OS/2-based local-area net-During the next 16 months. FMCS will port its Natural/Adabas applications off the mainframe, with each of the major application areas - case processing, arbitration, finance - targeted for its own Intel Corp. 1485-based server. Recourse Natural and Adabas

are the same in both environments, an application can be transmitted electronically, recompiled and brought up in just hours Scivetti said. He acknowledged his job was easier than that of many organizations moving to client/

re written in Natural and Adabas. Ethernot LANs in the agency's pipe-ethuilding here are connected by a fiber-optic acity backbone will allow Scivetti to locate all



North America, Inc. to aut per flows. He brought in some Cobol appli tions as well but gradually moved everything to Software AG products. "I converted every-thing to Adabas and Natural because I thought I might want to change platforms some day. I



# Board speeds Oracle client/server apps

Ry Kim S. Nash

Solbourne Computer, Inc. in Longmont, Colo., recently up veiled a high-capacity memory board specifically designed to boost the performance of Oracle Corp.'s client/server financial applications, which some users have said hog processor and memory needs

Although other users disagreed that Oracle's accounts payable, general ledger and other financial systems un tedly eat ap resources, enough Solbourne customers had talked about the sit oation to prompt the hardware maker to action.

Typically, shops running Oracle Financials experience sive growth of date and [number of] users once they've been using the application for a time," said Lisa Drake, director of marketing at Solbourne. The financial apions generate large sort routines that can be cumber some to plow through, she said. Solbourse's 512M-byte nory board was designed to let users temporarily stash whole tables and indexes in memory, which gets the data out of the way of a processor working through a user query

Necessary upgrades Some users of other bardware have reported unp mory or processor apprades to accommodate Oracle Financials. Boudin Bakeries in San Francisco originally planned on 48M bytes of memory to run general ledger, accounts payable and fixed assets but added 16M bytes more after going live with the system this spring, according to Eric Schumacker, information systems manager for the

lves we're very pleased with," neker said, adding that the memory upgrade was not 'major ... but still was needed." Boudin installed the software in February on a Wyse 7000 Model 7401 multiprocess ing server from Wyse Technology, Inc.

Other neers said the upgrade requirements were not necessarily any fault of the Oracle software itself. Rather, a stive change in the way people operate client/server eations can require more processing and memory musele. For example, the nature of the work of financial us ers can require them to open multiple application sess and keep them open all day, according to Mark Farnh e architect at Burlington Coat Factory in Lebanon.

pes users don't take into account that client server is more than moving software around to diffe hardware. Client/server changes how you work, too," said Furnham, who is also president of the Oracle Applications

In general, Farnham noted, most applications can benefit om added memory, whether or not they need it to actually get the job done. Burlington Coat Pactory runs Oracle's general ledger, accounts payable and purchasing applications on several Sequent Computer Systems, Inc. Symmetry Unio

The systems also require "a lot of memory," Farnham ac-nowledged — 320M bytes, to be exact. "With Oracle, the more memory you can throw at cache, the better the overall

Oracle adds Vines support. but Version 2.0 lacks link

By Klm S. Nash SECTION SHORES, CALIF

After two years of cajoling from several users Oracle Corp. has begun to support Banyan Sys-tems, Inc.'s Vines network operating system The fly in the ointment, bowever, is that while Oracle's SQLNet 1.0 link connects Oracle da base neers directly to Vines, the latest vers

- SQLNet 2.0 - does not. And Oracle has not itted to adding Banyan support to the newest version of the product. Banyan and Oracle recently announced a SQLNet driver for Vines to let meers access Or-

acie 7 databases running on PCs and worksta-tions running The Santa Cruz Operation's SCO Unix operating system. While neers are happy to have the Vines con-nection they have been waiting for, they griped

about not being able to take advantage of new features in SQLNet 2.0, such as better perfor mance monitoring and administ

"This answers a lot of our troubles ... but we might still find ourselves up against a brick wall not being able to run SQLNet 2.0," said David Kreines, project manager at Educational Test

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# **Ocean-floor images** sail worldwide

WOODS BOLE, WASS

When Woods Hole Oceanographic In stitution scientists send a remotely operated vehicle (ROV) into the ocean pths, they use distributed computing technology to immediately view can-floor images. And, by extendi

a shipboard local-area through the Internet, they now send those same im-ages via satellite to other laboratories worldwide.

Leveraging the power of and Unix workstations, the ists relay images from 20,000 feet below the ocean surface to a ship floati overhead. The Internet de feeds were tried for the first time this spring during an erwater survey in Me co's Sea of Curtez, scientists

bere said Woods Hole was assisted by Electronic Data Systems Corp. in Plano, Texas, in ex-

ding the internet links down to the "We extended the internet by real time satellite link to the ship and down to the vehicle," explained W. Kenneth Stewart, head of Woods Hole's Deep

Using a technique called multicast ng, the newly acquired data was world, he said. The imag es were broad

nais, according to Stewart.

06 apps not ready One factor in the slight delay was the

ntists' use of Sun Microsystems, Inc.'s SunOS operating system, Stewart said. The lab has not yet converted many of its SunOS applications to Sun's new Solaris 2.X operating sys-



System V Release 4. Conversion work will start this fall, he said, after the lab's prime diving season is over One real-time Sun application is already in use: A shipboard Scalable Pro-

a VXWorks real-time operating system nar processing. Sonar sign critical for proper positioning of the ROV, require response time on the order of 100 microseconds, Stewart said.

Roving submersibles use a 100M bit/sec. fiber-optic datastream, which is split into 10 10M bit/sec. segments, Stewart said. That way, telemetry, dig ital data, digitized sonar and bro cast-quality video can share the total excitable handwidth. The fiber-ontic link is tethered to the institute's ship, which is outfitted with up to a doz

comparable to limited data con cations from Woods Hole's famed Alvin submersible, a pressurized vehicle that carries a pilot and two scientists Alvin has an underwater telephone and can transfer data at 1.200 bit/sec...

Stewart sold

"A typical dive cycle is eight to 10 bours, and you only get to spend three to four hours of that on the bottom," he said. "There's a lot of economics driving the use

ked on Unix Woods Hole's use of Unix workstations is extensive. The occanographic lab has about 160 Unix workstations, including 125 Sun workstations (see story at

right) technique opens up possies for global cooperation on oceanic research. But everyday work at the lab also depends on networks of neered Univ workstations and the In-

"We use electronic mail for commu code over the [Internet] network and transfer files," Stewart said, "Most of our real-time systems are on the internet, and we can do first-pass pro ing that way'

technologies that can meet users' hig

bandwidth requirements, such as 100M

# All we want for Christmas

# Faster Token Ring explored, not established

By Lynda Radosevich

Like their Ethernet-be Token Ring shops may see the em me high-speed, local-area not work options aimed at helping them migrate to more powerful LANs whi preserving their investment in existing ken Ring hardwa

A working group from the IEEE 802.5 nittee in charge of setting Token Ring standards this month will begin accepting technology proposals for speed-ing up the token architecture. Two major ayers, IBM and Proteon, Inc., plan to rticinate with pro Unlike Ethernet, the Token Ring archi-

ecture has not been targeted for upgrading in the recent past because it performs better under heavy loads than Ethernet, and it results in fewer bottlenecks. For customers who have seen bottlenecks, Fiber Distributed Data Interface (FDDI) is a common solution. However, IBM is looking at methods to belo users up-

cabling, hubs, routers and, in one scenarlo, adapter cards, said Bob Roth, manager of network acces marketing at IBM

For Jerry Noble, director of telecomcations at the merican Cancer So. ciety, a 4M/16M-bit/ sec. Token Ring shop in Austin, Texas, the

idea bolds promise. "Now I don't see the need for highereed Token Ring but for future upgrades, I would like to keep the same hardre and cabling and just figure out a bet-

r way to use it," Noble said

because "they clearly stated that they However, Tom Nolle, president of coning firm CIMI Corp. in Voorbees, N.J., will make ATM compete with Token Ring

said IBM is s

speed network than souped-up ver-sions of Tokon Ring. Adding new optic will moddy the water Paul Callahan, a se-

nior analyst at Forrester Research, Inc. in Cambridge, Mass.,

hit/sec. Ethernet and

Transfer Mode (ATM)

switched Ethernet,

are further along in

the development cy-

cle and offer more ap

cal bases for his

Asynchronous

prices at the desktop."

Bandwidth is growing incrementally at the desktop, where people are "ex-tremely reluctant to spend money." Fur-thermore, FDDI and ATM are the dominant backbone technologies so there is not much room for high-speed Token Ringin a crowded market, Callahan said. The options for boosting Token Ri fall into two categories. First is a highspeed network that retains Token Ring frames but updates the signaling. This would require managers to switch adapt ers but would allow the use of existing management and routing software and expertise in the move to a higher speed network, said Jim Cario, a Ti technical staffer and vice chairman of the 802.5 committee. The other option is a switched hnology that begins to look a lot like t00-BaseVG, the fast Ethernetlike technology proposed by Hewlett-Packard Co

and ATAT "I think it's a little too soon to tell whether a separate standard will come to other committees, like tooBaseVG,"

# Best of Both Worlds

The HP Windows Client meets user and system administration needs that once seemed worlds apart

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Windows Client offers client/server computing with centralized administration of PC software and data for faster, easier backup and simplified management of applications. The elimination of disk drives from the desktop enhances data security and control of the software environment, while reducing the risk of data theft and virus infections.

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# NCR adds app processor Fed mediators

System is targeted at downsizing projects

NCR Corp. recently introduced a system designed to help maintrame users down-size applications to Unix environments while retaining on-line transaction pro-

Composed of eight Intel Corp. 1488 mlcroprocessors, the NCR 3600 Unix Application Processor is an engine design to help users rewrite and downsize ap-plications from IBM-class mainframes to NCR 3600 massively parallel processing (MPP) Unix-based machines. Pricing starts at \$350,000. NCR is targeting users of its DBC/1012 massively parallel data

Filling a user need Peter Kastner, a vice president at Aberdeen Group, a market research firm in Boston, said the application processor will fill a need for NCR 3600 users by helpng to meld the decision-support capabil-ties of the NCR DBC/1012 with the batch rocessing and OLTP capabilities that ainframe computers typically provide. The application processor delivers

Corp. and Sybase, Inc. relational dataneut systems to run production applications simultaneously with DBC-derived decision-support applications Kastnersaid

# Used by top firms The DBC/1012, which NCR obtained

through its acquisition last year of Teradata Corp., is a massively parallel database engine used by 150 Fortune 1,000 companies, including several leading kerage houses, airlines and retailers such as Wal-Mart Stores, Inc. and Kmart Corp. The systems provide decision sup-port, including analyses of customer

The system to which NCR is trying to move IBM-based software, the NCR 3600, is a Unix-based MPP machine powered by dozens of interwoven 486 chips that break down and analyze problems at their simplest levels. A typical NCR 3600

comtom starts at \$1 million Poter A. Dorsman, vice president of worldwide marketing at NCR's Large company plans to add Intel's Pentium processors to the application processor

#### CONTINUED FROM PAGE 51

manage LAN assets and control the envige LAN assets and coulror the current ent. He said that could be important when the agency upgrades to servers with Intel's Pentium processors. Scivetii said the move to client/server

will require an investment of \$650,000 and will knock \$100,000 off his \$1 million IS hudget, mostly from reduced hardware maintenance and software license fees. He said that figure is conservative;

# Vines

#### CONTINUED FROM PAGE 51

ing Service, Inc. in Princeton, N.J. Furthermore, a third product - SCO Unix - is required to make the Vines connection. Educational Testing, there fore, had to purchase an SCO Unix Hcense to give its 2,000 Vines users access to the Oracle database, Kreines said.

"But I do not have to buy more hardware at least," he added. The company's SystemPro server from Compaq Computer Corp. should suffice, he said. However, for those users looking for a larger, more scalable platform, Banyan it does not take into account that the agency would have had to soon repl the mainframe if it did not downsize.

He also said the move off the mai frame would make it easier and cheaper to add new capabilities to the infrastruc-ture. "In the mainframe world, evertime you want to do something. IBM says. Well, you gotta have this software or th hardware, 'or, Your this or that is a little slow or has to be reconfigured."

FMCS plane to add imaging capabili-ties and a fax server, both of which will be greatly facilitated by the LAN environ-

# lane to support Vines on Hewlett-Pack

Meanwhile, Kreines, who is also chaman of the annual conference hosted by the International Oracle User group said Vines support from Oracle has been a long time coming. "Oraclé pays atten-tion to the ioudest demand, and clearly there are more people asking for support for protocols" other than Vines, he exined. "But we're making progress." Several Oracle users are waiting for Vines support on various Unix boxes. Public Service Gas and Electric Co. of New Jersey, for example, sought an Ora-cle/Vines link on which to base a few opment projects.

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## Workgroup Computing

Alfa, Inc. has introduced a fiber desktop link for its family of high-performance Fi ber Distributed Data Interface (FDDI) trators and adapter oards.

As a fiber alternative to copper-batop links, the plug-and-play desktop connection avoids electromagnetic and radio frequency interference, and it allows for greater distances than twisted pair FDDI products, according to the

Alfa's new products were designed to reduce error rates and increase network bandwidth. They can be used for distribed multimedia applications.

The concentrators cost \$4,500, or apreximately \$562 per port. Adapter card erices range from \$795 to \$1,495. ► Alfa

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Althum, an IBM subsidiary, has an nounced that it has started shipping its computer-aided design (CAD) software on the Unix-based Hewlett-Packard Co. HP Apollo 9000 Series 700 workstations. According to the company, Micro CADAM supports beterogeneous, worldwide networks because it provides identical function and direct data-sharing

cross multiple environments. The Micro CADAM product family conists of Micro CADAM Plus, a mechani

design tool; Data Transfer, for exchang ing model data with mainfre CADAM systems; Alternate Characte Sets, for drawing annotation in non-En-glish characters; Micro CADAM LDX for CAD library management, data extrac

tion and bill-of-material generation.
In addition, Micro CADAM Access is an eu architecture that allows Micro CADAM users to write programs that in erface the data in the Micro CADAM del with other business proces cluding family of parts management and

Micro CADAM View allows for paperless communication across the corpora-

Micro CADAM Plus on the Unix platform costs \$4,785. > Altium

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wercore, Inc. has introd and Verrier 2 of Network Scheduler 3. According to the company, the pro

provides workgroups with a single source for calendaring/scheduling inde pendent of a computer platform, messaging system and network operating sysNetwork Scheduler 3 has an intuitive raphical user interface and offers Mac-

Peatures include more intuitive views, ded reporting expabilities, a wider variety of user options and improved ag-and-drop features, the company In addition, a tab style user interface

lets users toggie between daily, weekly and monthly views by selecting tabs aim-ilar to those in a paper-based date book. The new version will be available Sept.

ork Scheduler 3 Version 2 cos \$496 for five users and \$1,986 for 25 us-

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ungDAT, Inc., a subsidiary of Rexon, c., has introduced the DX Series DDS-2 gital audio tape (DAT) drives. ies the 4G-byte Model 3300DX and the 8G-byte Model 3400DX

a version. According to the company, on highly compressible data, the 3400DX can store up to 16G byte (4-to-1 compression). A 1M-byte data buffer enhances the drives' system performance, and a 40-secfile search time is provided for fast data

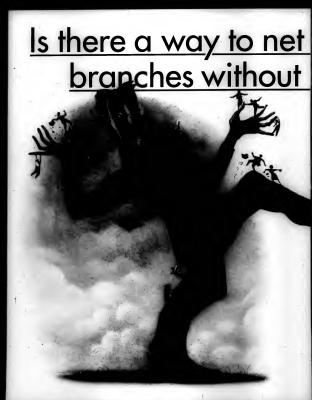
The drives also permit downloading of firmware updates to flash memory through Small Computer Systems Interface (SCSI) has transfer or DAT Inprdownloading, the company said. The DX Series drives include SCSI-1 and SCSI-2 interfaces and use the company's SCSI

The 4G-byte 3300DX costs \$1,465, and the 8G-to 16G-byte 3400DX costs \$1,660 ► Bezon

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Symbiotics, Inc. has announced an OS/2 version of Networks Connect, a network Dynamic Data Exchange and elip product that enables users on a ner to hot-link data between applica The software is compatible with N works Connect, the com Windows version. Cost: \$149 per us piotics, Cambridge, Mass. (617) 876 .... Image Machines Corp. has as nced ImageCenter Version 2.2, Wi ows imaging software. The pr viewing, scanning, editing and prin raster images are combined into a Win dows application for end users or sys-tems integrators. The product can oper-ate in stand-alone mode or can use software and hardware options. Cost \$695. Image Machines, Herndon, Va (703) 709-7475.

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# Network needs outpace SNMP

The bloom seemed to be off the Simple Network Management Protocol (SNMP) rose at the recent Interop '93 August show with users and vendors saving that the de facto network management standard needs serious work if it is to cope with increasingly complex enterprise network man-

agement environments While some strides have been made with such efforts as SNMP Version 2 and promises by some enterprise management vendors (see story page 66)

very of critical

managing a particular

ts, perticularly over

such moves are vaguely defined and far off. "SNMP is oversold" and hurdened with "expectations beyond its capabilities," John McShane, manager of network management system development at DHL Systems, Inc., warned his audience at an Interop session. "I suggest applying SNMP to the wide-area net-

work with caution Network gridlock

What companies such as DHL Worldwide Express are encountering, as they roll SNMP management across their companies, is a great deal of traffic congression that derives from the standard's

centralized polling-based method of managing distributed devices, according to Andre Hughes, a senior manager at

The package handler had a particularly tough time with its SNMP-based network management system because overseas lines tend to be unreliable and high-speed leased con-

ons hard to come by, McShane said. DHL had installed Hewlett-Packard Co.'s SNMP-based system. OpenView, and could not figure out why its error essage indicators were going from green to red to green like traffic lights. The problem: Messages between managed devices and OpenView were getting lost on route because of the inherent unreliability of overseas lines and of Trans-SNMP, page 66

# Internet lends global helping hand

In Pakistan, scientists received in structions for safely incinerating a toxic waste dump in time to prevent nebemical disaster. In Kenya a doctor saved a life by quickly finding information on how to adsters new medication. These examples of true bott

line electronic networking bene fits showed their colors recently when representatives from 67 developing nations apoke out about their dreams and efforts with com icutions technology at the Interop '93 August trade show

Individuals involved in projects to build modern communications infrastructures in their respective homelands suthered to share experiences and knowledge at a

showside roundtable. The international visitors came to the U.S. on funding from a consortium of companies, includ Novell. Inc., and scholarships pro vided by Interop Co. to attend the back-to-back Internet community

bal village

Their goal was to glean education they could put to use in developing their respective nation's fledgli ways. These systems include links into the Interpet, the 100-coun academie and research network that is the main vehicle for creating a "global village" for sharing information across geographical, economic and enitural bound

proved educational, health care and political systems for all coun

tries. Many of the Interop representatives had encouraging stories to relate

Hasan Rizvi, a physicist from Pakistan, luss established data links among 42 educational institutions In his country under a United Nations program. Pakistan "stands

ery of the glob al village towith an X.25 public dato network and counce tions to the In ternet, he said Rizvi related the hezardons

waste story "Ап инэстири damped 2% tons of toxic material in a public place in [the city of] Ka-rachi." Although Karachi scientists were able to identify the sub-

ntance, they were uncertain how to dispose of it. An "electronic SOS" went out via the internet to members of the Association for Progress of Conored INET '93 and interop servation, including Greenet, Eco-

net. Pracenct and the U.S. Environmental Protection Agency Rizvi cited an "overwhelming" response by electronic mail and fax that mented in calentiete Incomine how to incinerate the substance Meanwhile, another call for help

over the internet allowed a Kenyan doctor to quickly get information on how to administer a new medication to a critically iii patient, said Shem Ochuodoho, Kenya's delegate. 'We could not get the hard copy of the article about this medication anywhere in Kenys, but we were able to download it from the Internet and put it on the patient's life, he said Chile's Ernesto Laval, a univer sity technologist, said he expects to have full access to the Internet

"in a couple of years." At that time. place involving primary and mid

of the country tion is re

from the Re en told of his et forte at being the first to start

cations infrastructure in his na munist blue. He is setting up a his country, he said, because a ea-

Satisfied with satellites Bah said he was disappointed that

visibility at the shows, "Ameri cans scoff at satellites because they say there are delays associ ated with it," be said. "But we're willing to live with them Finally, Predrag Pale from Cro

atia said he hopes that computer networks will discourage further offict in his war-torn country 'in the autumn of 1991, who

there was little chance we'd surfew technologists persuaded the verament to spend \$1 million on Unix-based networks that "allow opie to grow together and less the opportunity for misunder standing and conflict," he said.

# Reporter's

Notebook

elt and its Windows NT we tably absent in the mating dance that forms, applications and managed devices customarily do at Interop. Digi and IBM spokespeople confirmed th eir new alliance will enable IBM's first on Digital's Alpha and then, very ken of providing integra-tion of its own NT systems management product, Hermes, with the leading

ats to keep up with rival N which has already anno tion of its NetWare Man



links provide only primi onthe it will provide

Unipress Software has ported LAN Manager to Sun's Solaris and Novell's UnixWare platforms.

The X 400 standard switched into high gear OSIware and Selt-Switch introed on the 1988 version of the X. 400 tocol. Also, Enterprise Solutions ourced a 1968 X.400 messaging



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## Network needs outpace SNMP

CONTINUED FROM PAGE 65

col implementations that carry SNMP,

Because it could not afford to install 1.5M bit/sec. leased lines out to all 40 of its sites worldwide, DHL developed its own "sophisticated agents" that do their

own local politing and send only signifi-cant data to the central OpenView platform. McShane said. In addition, the company implemented a utility permitting each device to peri-

odically send a "confidence signal" that lets the management system know "I'm While SNMP Version 2 may resolve

some of DHL's difficulties with the protocol (see story page 67), McShane said he had gotten mixed messages about how easy it will be to have a mixed installation of Version 1 and Version 2 devices managed by the same platform, indeed, the piethora of potential network ent standards,



dation's Distributed Mag agement Environment and Common Management Information Protocol, is extremely confusing to users, he indicated

The latest enhanced gen eration of DHL's enterprise wide network management system is scheduled to be nted by the first half of next year,

SNMP Version 2, the Open Software Foun-

## No two vendors' plans alike

wellLAN

iewiett-Packard is setting up its seView for Windows platform domain manager for the Unix sion of its product, a company

orthy LAN NetView, an OS/2 "workgroup manager" for OS/2
"workgroup manager" for OS/2
Token Ring networks that will act as a domain manager to IBM's en-terprise manager, NetView/6000, according to Bill Warner, IBM's di-

In manager to another beoprise manager
Novell's NetWare Management
stein is the to become a domain
stein is the to become a domain
stein in the stein of the Microsystems,
c. a SunNet Manager. And severvendors hope to develop links
ait allow Microsoft Corp. is Herten to report Windows NT mangement data to their systems.

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# Newest SNMP leaves unanswered questions, too

A packed ballroom of users and vendors at the Interop '93 August show got a preview from developers of how Simple Network Management Protocol (SNMP) Version 2 will resolve - and in some cases, fail to resolve - the major limitations of

The jury is still out on whether SNMP Version 2 will provide the robust network management environment that users need for the enterprise.

SNMP Version 2 is said to remedy sev eral Version 1 problems, such as the lack of security and the inability to access large chunks of information at one time. was whether SNMP Version 2 would finally allow managed devices to initiate com mications with the managed system instead of waiting to be polled. This is a y concern for corporations that find MP's regular polling feature too bandwidth-intensive and would like managed systems to initiate contact with the man

portant to say.

ace confirmed that the new vers will retain the old centralized polling architecture. Allowing managed devices to agement system would add to the com plexity and cost of such systems and risk broadcast storms on the network, said developer Steve Wallbusser at Carn Mellon University in Pittsburgh.

"SNMP Version 2 is the same or as SNMP: agents, polling and traps," said Jim Morehouse, manager of network management strategies at Moto His company is still hoping that Common (CMIP) will do the job.

Midlevel layer On the other hand, SNMP Version 2 does ions, just like CMIP, the developers said. And in the works pow is a mament information base (MIB) that will allow a "midlevel" management system to manage local devices and report up to a

central system.
Other SNMP MiBs that developers are working on include the following A ping MIB that would allow the man agement station to check the status of re-

\*An appregate MIB that would allow an agent on a managed device to do calc tions on network statistics and send just the answers, not the raw data, to the

management system · A history MIB that would keep records of activity on remote systems for later ac-

Another concern that users voices was whether Data Encryption Standard (DES) export restrictions will dissuade vendors from implementing the security piece of SNMP Version 2, which is baon DES

Some vendors will probably not im ment Version 2 security because of ex port restrictions and because the securi ty feature may prove too memory-hun-gry for smaller devices, the developers noted

Users also expressed concerns about 1 and Version 2 devices and syste However, network management plat-forms will support both protocols, letting users mix the two types on managed de vices, the developers said.

HOW TO

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# Centralized security package verifies IDs

CARBRIDGE, NAME

Network security administrators entrusted with keeping intruders out of their companies' systems got a little help recently from Security Dynamics, Inc., which an nounced an updated server software package that centrally

sticates a nser's identity. ACE/Server Version 1.2 allows isors to centrally manage user access to network resources via gateway, remote dial-up or di-

rect connection. Most network intruders typical iv exploit the weakest link on the network - the static password. ACE/Server Version 1.2 is used to conjunction with the company's eureiD Card, a credit-card-size card that displays a randomly generated access code that autom eally changes every 60 seconds.

To access a protected petwork a user enters his password or personal identification number and the SecureID card. After the

m Sawyer Software Corp. has start-

ed shipping the Network Layout Assis-tant for SunNet Manager 2.0 and 2.1. According to the company, the Net-

work Layout Assistant is a product de-

signed to bring network device mapping es to SunNet Mana

The product reads the network infor-

ation in a user's SunNet Manager data

base and automatically repositions the

device icons and their connections.

> Tom Sawyer Software

rkeley, Calif. 94710

Brightwork Development, Inc. has an

pounced SiteMeter 4.0, a utility product

that offers multiplatform metering sup-port for DOS and Windows clients con-

period to Novell, Inc. NetWare local-area

1824B Fourth St.

(510) 848 085

pany said. A single-user license costs \$895 tors are correct, the user is grant-

Also nesewords are never exand on the network and ACE/ Server's central administration software monitors every petwork access attempt - both authorized and unauthorized. Such detailed activity audit trails assure user acuntability and provide a substantial deterrent to insider abuse, company officials said.

The ACE/Server updates exnd its range of protection by offering new support for several platforms, including Hewlett-Packard Co.'s HPUX, Silicon Graphics, Inc.'s Irix and Motorola. Inn's System V/66 Version 1.2 is also compatible with Sun Microsystems, Inc.'s Sun-

OS, Digital Equipment Corp.'s Ultrix and IBM's AIX system environ-The refreshed package also fea-tures node authentication, which prevents an unauthorized workstation from masquerading as an authorized ACE/Server client.

SiteMeter 4 0 is priced at \$495 for a 100

user file server license and \$995 for a 250neer file server license.

► Brightwork Decelos 765 Shrewsbury Ave Jerral Center West Tinton Falls, N.J. 07724 (900) 530-0440

Blueline Software, Inc. has announced Vital Signs for VTAM 3.0 (VSE 3.0), a network and VTAM performance monitor. The product offers new monitoring capabilities that permit users to interface directly with Sterling Software, Inc.'s

Peatures include automated device cement with three layout styles: hier-Net/Master for exception reporting. VSE 3.0 can collect and display X.25 archical, circular and symmetrical. Grouping is controlled automatically Network Packet Switching Interface sta based on Internet Protocol (IP) address. IP network masks or through an admintistics for firms with X25 communi tions lines including private internationistrative grouping dialog panel, the comal networks and sites with public packet-switching networks.

According to the company, the data can be used to monitor traffic volume, arrors and line utilization. VSE 3.0 prices range from \$8,680 to

▶ BlueLine Software Swite 690 5775 Wayzata Blvd.

Minneapolis, Minn. 55416 (612) 542-1072

ssion Control Protocol/Interne

Control Data Systems, Inc. has annetworks. According to the company, SiteMeter is a Windows-based product that was depunced the Open Systems Dynamic Network (ODN), a network integration prod simed to centralize the task of metering uet designed to provide a dynamic link m IBM's Systems Network Archieture (SNA) and devices based on

Workstation administration and the need for menu-based, stub file and TSR

### Briefs

Firefox takes on Novell OSI line

Novell, Inc. and Pirefox Communicati Ltd. in West Midlands, England, have a sales, marketing and support of Novell's NetWare File Trans Management (FTAM) product. FTAM is a series of NetWare Londsble Modules that allow Open Systems Interconnect PTAM hosts to access NetWare file systems. It w distribution channels, according to the

**UB/BBN venture: First fruits** 

Stream Corp., the joint venture on Ungermann-Bass, Inc. and Bolt Beranek and Newman, Inc. (BBN) to develop and market Asynchronous Transfer Mode products, recently announced its first product. The \$25,00 and-up FauleSwitch is scheduled to ship th

Hotel chain picks MCI Cartson Cos., the \$0.0 hillion p

pany for a chain of botels and nts, picked MCI Tel as Corp. to provide private network and 800 services. For insta

International will use MCI 800 services exclusively for its worldwide reservation al will use MC1800 serv

Linking the cables

ing cable operators in the U.S. have ad an agreement with Merousy tions, a national network, that we them to switch their own sicutions traffic and retain s greater percentage of revenues. The companies, including Encom, Genera ile, Nymex Corp., Southwestern Bell. st Communications and Videotre also signed a reciprocity agreement with spanies pay one another equal rates for

SHORT TAKES Wellfleet Communications, Inc. agroed to license Data Connection Ltd of London's SNAF APPN Network Node software and develop APPN Network Node aupport for its multiprotocol routers. BM to license its Advanced Peer-to-Peer tworking (APPN) architecture, which owa Wellfleet to label its products as APPN-compliant.... Retix entered the wireless/mobile market last month when it ions, Inc. to supply rou

San Jose, Cattl. 95134

**Product shorts** 

Copcord Communications, Inc. has in troduced the TRAK/Remote Poller, a softrare module designed to automatically ather, store and forward critical data om remote networks back to a central site at regular intervals. Cost; \$3,000. Concord Communications, Mariboro, Mass. (508) 480-4646.... Alloy, a division of Impuise Technologies, Inc., has in-troduced MultiPeer 2.0 for both DOS and Windows environments with built-in Novell, Inc. NetWare connectivity. The prod net provides seamless integration of DOS, Windows and NetWare workstans on the same network. The software is available to single, three, five and 10-

user licenses. Cost: Ranges from \$90 to \$769. Alloy, Littleton, Mass. (508) 486-0001.... Simpact Associates, Inc. has announced Procway, a family of programmable gateway communications ervers. The product provides wide-area networking connectivity for LAN-based rms such as Unix, TCP/IP and th from Digital Equipment Corp. and IBM Preeway provides from eight to 64 ports of connectivity: Cost: Starts at \$12,500. monet Associates, San Diego, Calif. (619) 565-1865.... StrataCom, Inc. has introduced a standards-based Asynhronous Transfer Mode (ATM) user network interface card for its IPX network ing switch that permits access to ATM networks at Ti or El speeds. Cost \$12,000 to \$18,000 per port. StrataCom. San Jose, Calif. (408) 294-7600

Protocol (TCP/IP) According to the company, ODN provides a series of gateways that support direct access between TCPIP-based de-

vices and SNA VTAM applications, eliminating the need for add ing or modifications to the IBM environment. ODN can access a bost of Unix platforms and applications and belp improve the performance of legacy mainframes, the company said.

The base price for an ODN-mateway is Control Data Systems

4201 Lexington Ave. North Arden Hills, Minn, 55126 (612) 489-4484 Compression Labs, Inc. has announced a feature expansion of the Eclipse 8100 family of videoconferencing

A 27-in, monitor version of the Ecti 8100 (domestic) and the Eclipse 81001 (international) small-group videoconfer-

encing systems were introduced. The 27-in. Eclipse version incl GraphiCam, a document camera that of fers a 10-to-1 zooming magnification en pubility. According to the company, the 27-in. monitor displays larger images for

cilitating more extensive graphics Other festures include standards proprietary-based video algorithms standards-based full duplex audio and network interfaces A complete 27-in. Eclipse costs \$22.50 for the domestic version and \$27,900 for

the international version Compression Labs

# MPP: Ready for commercial break

By Ellis Booker and Johanna Ambrosio

#Once as rare as hens' teeth, comm cial applications for massively parallel processor (MPP) computing finally seem to be coming within reach even as some established MPP vendors strug-

Despite turmoil at some com such as Thinking Machines Corp. in Camhridge, Mass., a growing list of bardware veodors have stepped up to the MPP challeast, promising products to push this technology into mainstream business environments. These include IBM and NCR Corp. and a handful of commercial software developers, among them Oracle

Corp. and Candle Corp. nost exclusively with research systems. For this reason, users remain extremely cautious about this promising but uoproved architecture. Early users have also complained that MPP vendors have equately met the commercial ma ket's expectations for tools or support.

Bag of goodles
David Audley, director at Prudential Securities. Inc. in New York, has been a parallel processing user since 1988, wheo the company installed intel Corp. ma chines for heavy-duty mathematical

Back theo, Audley said, "We expected very little from the veodors, and we didn't get anything we didn't expect."

MASSIVELY PARALLEL PROCESSORS ERCIAL DATA PROCESSING VENUE (IN MILLIONS)



Now, however, the parallel vendors are oginning to provide some of "the good ies," as Audley calls them, for functions such as systems management and stan-dards for operating systems and communtions. They are also starting to allow a single systems image for the whole

At Travelers Corp. in Hartford. Conp. Lawrence Bacon, senior vice president of information systems, is "interested in parallel processing for both batch pro-cessing and database access. But he has not purchased such a marbine vet "There isn't really anything in the transaction covironment without having to reevent your environment," he expla For the data retrieval side, he said, "we have not come up with the perfect blend of application need software and hard-

vare capability:" Lots of comm rcial users are curious however

"At the supercon you'll find people walking around

with names of banks and retail chains on their badges," said Michael P. Burwen, president of Palo Alto Management Group, Inc. in Mountain View, Calif.

#### Expansion expected Burweo is extremely bullish, and he predicted the annual market will be worth \$4 billion by 1997,

nearly half of it coming from business applications, particularly on-line transaction processi He also said the 15 or so vendors

ng MPP bardware today will expand to at least 30 by mid-1994; he said he expects 8,000 MPP systems worldwide by

One of the furthest along of Think Machines' 100 or so CM-5 users is Epsilon, a wholly owned subsidiary of Ameri-can Express Co. in Burlington, Mass. ext month, in fact, Epsilon will deploy at American Express a production ver sioo of Quantum, un MPP-based database application. Specifics about Quan-

tum are being tightly held. Several Wall Street firms are also kickne the tires of MPP systems as a way to et complex queries in less time manufacturers have decided that MPP is er future ICW, Aug. 91.

MPP, page 74

## Turnover

## IBM to release AS/400 tape library been both oseful and reliable, bot

By Craig Stedman

IBM's expected introduction this week of an automated tape library for Application System/400 computers may help legitimize the concept with AS/400 users, but analvets and other vendors said demand for the libraries is likely to remain limited to a subset of large AS/400 shops for now AdStar, IBM's storage subsid-

iary, confirmed that it accelerated the shipment schedule for the library from the first ball of 1994 to late this year. The unit will reportedly support about 200 of AdStar's 3490E half-inch cartridge tapes. with future expansion planned to the 2,000-tape range.

Now comes the hard part; find ing a market. Some early adopters of AS/400 tape libraries intro duced by other vendors [CW, March 291 said the systems have

analysts said tape remains som thing of an alien concept to most AS/400 users compared with their mainframe brethren. 'The typical AS/400 shop

doesn't use a lot of tape because they tend to keep everything online," noted David Andrews, managing partner at ADM Consulting in Cheshire, Conn. Andre said he expects a reasonable library market to develop over time, but only at large customer sites.

Tupe libraries are "a real leap of

faith for an AS/400 manager" who is used to the machine's single-level disk storage farmat, added Kevin Beam, director of research at Reliability Ratiogs, Inc. in Needham, Mass. Performance is also an issue, he said: Because of conbe put back on disk drives bete

they can be accessed. Ed Taylor, director of MIS at in Scottsdale, Ariz., said it takes three to five minutes to bring up customer invoices stored on XL/Datacomp, inc.'s Nearline ACS 9706 library of 8mm cartridges, in part because of the need to involve disk drives.

Taylor added, though, that fast access times are not critical to nder, and he gave the Nearline oolt a strong thumbs-up as a lower-cost alternative to expanding his disk arrays. "In terms of buying more [disk storage], this will help us put that off for a long time,"

Ken Sadowski, operations man ager at Intergroup Healthea Corp. in Tueson, Ariz, said he has



unter by EMC C

for data backup. "It's just a little easier from s management perspective to kick it off and let it run," thun to rely on manual backup procedures, be

Other overs expressed little interest in libraries, though, Denois Py hum, vice president of inform tioo systems at Insta-Care Phar macy Services, Inc. in Woburn ing had made it cost-effective for Insta-Care to simply mirror all ut

its disk-based storage. Brad Graham, marketing s ager for tape products at XL/Data comp. said libraries would proba bly appeal only to mers with more than 10G bytes of storage. "We're obviously marketing to 8406 cushe said, referring to IBM's high-end AS/400 system

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# Software AG adds to Adabas

RESTON, VA

 Software AG of North America, inc. will introduce a product feature later this year that can significantly boost perfor-mance of its Adabas database managent system on custo rs' largest

Adabas Symmetric Multiprocessor, or Adasmp, allows users with multiprocessor IBM MVS/ESA systems to distribute activity against a single database over multiple processors, with one doing updates while others work in a parallel, read-only mode.

"It removes the single-CPU bottlenock," said Scott Watanabe, senior research and development specialist at

Software AG. Watanabe said Adasmp, which will ship free to MVS/ESA customers early next year, is geared for high-volume on-

line transaction processing and "beavy cess" batch processing. Greg Dzieweczynski, technical manager for database services for the state of Minnesota, is a beta-test user of Adasmp. In a series of benchmark tests.

when simulating an application using IBM's Teleprocessing Network Simula-

trans/sec., response time was improved. 16% and throughput 47% on average, be

"It was exciting to see the benefits of the product," Dzieweczynski said. "In-creased throughput and better response ne are the two key factors."

He said the value of the approach is

Senchmark ter ains of more t	its at the state of A than 40% with the i	Vinnesota showed Adabas Symmetri	response time Multiprocessor
	5.5 sec.	2.9 Sec.	3.2 sec.
	_		

likely to increase as new generations of mainframes employ more and more prors. By 1995 or 1995, mainframes could have 32 processors, the maximum number Adasmp now supports, he said. However, Dzieweczynski cautioned he found it improved response time by users not to assume that performance 40% and throughout by 20% on average old increase linearly with the number

found, for example, that while devoting

sors, to read-only theres improved rense time and total throughput over he old one-processor approach, even better results were obtained when just two read-only nuclei were defined (see chart). Paging, I/O contention and overhead slowed the systems down when too

many processors were pressed into service, Dzieweczynski said, although he con ceded that perfe mance tuning might

have improved reing capability is most ly based on code lready in Adaba

Watanabe said. Func tions such as lockout protection, restart and recovery are bandied in much the ne way as when Adabas is used in its

aditional one-processor mode, he said. However, Adasmp uses a new "route that sends acress commands to the read nuly processors and update con to the apdate processor while dynamically balancing the work load across all

abe said part of the pur Adasmp is to show users "we are still Software AG's flagship product intro duced 23 years not

Software AG gave users attenu national data management sympos bere a sneak preview of another upcom ing product, dubbed "Adabas, Looki GUI," or Adagui. It is a graphical user in terface (GUI) to Adabas that icts users see what is going on inside the database anagement system in real time.

Inside look

Adami allows users to see, to a varie of colors and graphical formats, CPU use and activity, dual-protection log use and status, format pool use, thread status work pool use, work protection area sta tns. 1/0 activity and file use and activity Users can choose which datab amine and can select sampling intervals

from one to 60 seconds Adagul requires a PC with 8M bytes of memory and an Intel Corp. 1486 proces sor running Windows and Software AG's Entire Net-Work and Entire Net-Work for Windows. It also needs a Transmission Control Protocol/Internet Protocol con

nection to the mainframe and Novell Inc.'s LAN WorkPlace for DOS. It will be allable free on request in Novemb "Adabas has had problems in terms of

Watanabe said. "Now we are bringing the glitz." Watanabe said Software AG is also de veloping GUI front ends for its Nature Entire Net-Work middleware products.

# EDS rival bids low, lands General Motors contract

INVINE CALIF

atsourcing is not all in the family at General Motors Corp., where sabsidiary Packard Hughes Inter-connect bas struck a deal with a small, hungry vendor that agreed to a new twist in partnering and in

In selecting relative unknown Software Maintenance Specialists (SMS). Santa Ann. Calif.-based Packard Hughes decided against a bid from fellow GM subsidiary; outsourcing giant Electronic Data Systems Corp.

The three-year, \$1.96 million deal calls for SMS to run Packard Hughes' business and manufacturing operations while Packard Hughes shifts to an IBM RISC System/8000-based operation over AIX [CW, Aug. 30]

ben Knox, Packard Hughes director of information systems, explained that SMS agreed to a deal giving Packard Hughes a price break on the project's linchpin technology, COPICS Enhanced software from AGS Information Services, Inc.

The Communications-Oriented

Production Information Contra System manufacturing and husiness software is tailored to co nies in the defense industry, where many struggling businesses are contemplating hiring outsourcers as an IS cost-cutting man-What Knox proposed to the ven-

dors that bid for his outnourcing business was that they give him the software at little or no charge and use his company as a show case when courting potential defense customers who doubt the ability of an ontsourcer to run COPICS Enhanced while easisting

in a client/server transition. 'if they give me a good price and get us up and running, then they can so to the others and say. 'See, we did it." Knox said.

Lowest bidder Of the four hidders - Pyramid In-

formation Systems and the data processing group at GM's Hagi Aircraft Co. subsidiary were the other two — only SMS could after a brenk. In fact, Knox said, SMS price was unbeatable. It offered the software at no extra charme to the astonishment of the other hid-

ОП sourcing

Showtime

n what resembles a SMS gives Packard ighes free sultivare and then uses the outsourcing project a

L.A.'s troubled defense Industry, Possible future sites include the

ena, Calit-bas dak subsidiary.

"EDS said they couldn't give it to as at no charge, and they were sur-prised at SMS' ability to do that," he said. EDS bad already adjusted pricing to match an earlier tow bid by SMS but was unwilling to offer a software givenway. Knox said.

In a sense, Packard Hugh went in tandem with SMS on a deal that would reward the GM subsidiary for being the guinea pig in an SMS thrust into the defense manu-

The software is a boon to Pack ard Hughes because unlike the earlier version, known simply as COPICS, the enhanced version includes migratiou tools for converting to CIMAPPS, or Computer Inte grated Manniacturing Advantage Production Planning Series, a client/server manufacturing and ordering system Packard Hugh

plans to use on its RS/6000 system.

The arrangement was not purely a free ride for Packard Hughes because the company later agreed to pay to add its Foley, Ala., and Fort Defiance, Ariz., manufactur Ing operations to the outsoureing me. Initially, the SMS contract covered the company's manufa turing and business facilities here

Knox credited SMS with break or ranks with traditional pricing snisms and charging for the on up a basis that takes into ant end-user links rather than mainframe CPU eyeles. SMS will charge Packard Hughes an extra \$5,000 per month for each of the two locati they are added, based on a formula ests monthly pricing up or down by \$5,000 every time the con bined PC and terminal count changes by 50 up

peration language and for its

According to Knex, SMS priord the data processing portion of the early part of the deal on a per-endpr-box basis. Packard Hughes ties into a 3090 mainframe thro tion of 250 3270 term nais and PCs and pays \$30,000 p month, or \$6,000 per group of 50 boxes. The box charges account for a little more than half of the Or DEscritton cont

Knox estimated the outs deal will save bim \$1 million a yea. over the three years and pointed out that the loss-riddled con desperately needs that moure

We are the plankton of the food chain," Knox said. "We can't afford an iS budget that's 3% of our reve-" In its last fiscal year end Dec. 31, Packard Hughes tost \$2 million on \$80 million in revenue. Although this round of IS ove haul went to SMS. Knox said an

other being planned — a forthcom-ing computer-sided design project ould stay in the GM fami "That's EDS forte," Knox said

al from EDS when the time or

Ellis Booker

# Serve up simplicity



'cooking" for "info ion system" in the following sen-The best inform

tion system should be simple, underand, with a proper

dology (i.e., 'recipe'), easy to re-Only people who dine exclusively at McDonald's would be inclined to believe

his nonsense. A desire for simplicity - in lifestyles cuisines and information

ething of an obsession of late. Unfortunately, simplic-Ity is not always achieval nor is it always an appropristepping into the kitchen

ider this: Despite sev eral thousand years of practice, chefs everywhere (except maybe those in England) have failed to settle into a single, uniform kind of "world cooking." To satisfy our taste buds and our information services needs, we will always need "ebels," indi

viduals blessed with a special something that cannot be mass produced, bottled or captured as a set of rules and methods on a hard disk.

But la l'effective? Simple colking is, certainly, one kind of

cooking. But it's not the only kind. What's more, simple cooking may not be "effec-tive" cooking — it may not win awards or

restaurant customers.
Likewise, the bebe moth programing job that resulted in American Airline's was not a simple disb to make, but it did win the airline key advantage in its mar

ketplace. Would American Airlines have preferred a simple, modular and easy-tomaintain alternative? Of course.

But business rarely has the leisure to wait for that "simple, modular, fail-safe" way of developing new applications promised by vendors and, all too often. trumpeted by the computer trade press. (Like weekend cooks on the lookout for newlangled cutlery and gizmos that slice and dice, how often have 18 shops bought tools-CASE artificial intelligence, peural networking, etc. - that were adver-

tised as a way around complexity?) Compounding the problem has been the very success of some of these labor saying devices and approaches --- an expectation that simplicity and seamlessness Users given an easy-to-learn, easy-to-

is already out there

navigate graphical front end will, almost instantly ask for features and canabilities far heyond what they had with their old systems. Maybe this is the notso-secret reason why IS staffs have been rejuctant to deploy Windows, After cooking palatable but no-

mee steak 'n' potatoes all their lives, these staffers dread being asked to invent dishes to satisfy the hungry, increasingly sophisticated diners. A better strategy is to strive for simicity while accepting complexity. member that creation, either of a fab ulous dinner for four or an application ogram for the accounts payable de partment, is often a messy business. The

e is what matte Cooks have known this truth all along The proof is in the pudding."

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# MPP: Ready for commercial break

CONTINUED FROM PAGE 71

Such commercial uses are crucial to the visbility of the MPP marketplace, according to analysts. "It's safe to say that if the [MPP] indus-

try generated \$260 million in total revenue, then this industry niche has not turned profitable," said Gary Smaby, president of Smaby Group, Inc., a Minneapolis-based research firm. But Smaby and others contend that the

ercial MPP marketplace is on the cusp of significant growth. One prin reason, they said, is the coming availability of software already familiar to commercial users that will run on MPP archi tectures. John Senor, a vice president at Information Builders, Inc. in New York, spoke for many when he said, "We're looking at 1994." Included among the MPP software players are the following: \*Oracle bas about 15 commercial customers running its database ma ment system on parallel machines, said Gadi Majer, vice president of the com ny's massively parallel endeavors. The product is already available on machine from NCR. Kendall Square Research and Thinking Machines, among others. Ver-sions have been announced for virtually

·Information Builders' Focus fourthgeneration language already supports some parallel processing features under Unix, but additional features will be added next year around the same time the company's EDA/SQL database middle ware will run on parallel processors. "We will be able to put EDA on a server in front of databases that don't run on parallel machines, and EDA will be the parallel mechanism," Senor said

all the other players as well.

\*Candle Corp. in Los Angeles will bave by next year a tool set to help tupe IBM's parallel machine.

Meanwhile, traditional IS hardware suppliers are trying to move existing cus-tomers to parallel possibilities. IBM has started to talk at user groups about a tool to parallelize some applications (see sto ry below), and NCR already offers soft ware and services for users of its I and V proprietary mainframes to move them to Its System 3000 Unix machines.

Delivery dates

IBM's parallel database engine is on track for delivery inter this year [CW, Aug. 9]. NCR, which already bas a date base machine, has pushed back the de livery of its top-end, massively parallel system, the System 3700, to the "1995 time frame," according to a company swoman. 'We want to release it a the peak of the market," she said.

ties, likewise, have joined the MPP fray Convex Computer Corp. in Richardson Texas, plans to bring forth an MPP sys tem based on Hewlett-Packard Co.'s Precision Architecture-RISC process That system, slated for delivery in the first half of 1994, will range in price from \$500,000 to a couple of million dollars, ac cording to Convex Vice President of Marketing Jim Balthazar

But Convex's history underscores the difficulty MPP vendors will likely encoun ter: Despite a concerted effort to move beyond the technical/scientific sector Convex only counte a third of its business from sales into what might be called com

## Make way for Batch Pipes



1

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NCR

Soft has announced Version 3.0 of Elite/400 FWS and Elite/400 DSP 5250 emulators for Windows to IBM Application System/400 connectivity.

According to the company, highlights of the new product rollout include the following support for Novell, inc.'s Net-Ware for SAA using the SPX II protocol: support for Twinax links; a third-generatioo application called the NS/Router, a high-performance file-transfer system that is 50% faster than competing products; and variable font sizing, meau bar

hidiog and other enhancement The Elite/400 IWS 3.0 and the Elite/400 DSP \$ 0 each cost \$795

► NetSoft 39 Argonaut

Laguna Hills, Calif. 92656 (714) 768-4013 Platinum Technology, Inc. has intro-

duced Platinum Detector, software designed for analyzing DB2 applicatioo performance at meaningful tevels of granularity, the company said Platinum Detector provides access to

DB2 trace performance information at the application, package/database request module, plan and SQL call level. The product lets neers save historical application performance data; view the

Briefs

nion. The cou

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ne on PCs

and data

status of all available subsystems; con serve time and system resources with the ability to access any DB2 subsystem: and use functionality within all other Platinum products through Detector

global commands. The product is IBM MVS/ESA- and MVS/XA-compatible Platinum Detector Version 1.0 is priced

from \$29,873 to \$121,474, depending on ► Platinum Technology 1815 S. Meyers Road Oakbrook Terrace, III, 60181 (708) 620-5000

Quantech Systems, Inc. has introduced The Order Marshal, a native IBM Appliention System/400 mail order, catalog

and fulfillment system. The Order Marshal offers standard functions that include order entry, inquiry/customer tracking, form-letter customization, returns and refund process ing electronic telemarketer order processing, United Parcel Service, Inc. manifest, cash-on-delivery tracking, customer service and marketing support and user-maintained system controls

and security Credit-card processing is available as an optional module, and users can market their customer database with the Mailing List Rental module, secording to the company

nt's Open TransPort for MVS soft M's MVEN

OF A VI

al use at its U.S. o

The Order Marshal costs \$9,975. Duantech Systems Suite 200 300 Brinkby Ave Reno, Nev. 89515

(702) 829-5666 exco. Inc. has introduced UIS-Autostor a hierarchy al storage management

According to the company, the product natically manages disk space by transparently moving data between stor age media (file shelving) using an automatic storage management system. File shelving is a new VMS concept designed to keep disk space free for new and active

files, the company said. The product antomatically makes copies that are housed in various storage media for security purposes, eliminating the need for data backup.

ITS-Autostor maintains a log of all shelve and unshelve actions via a comprehensive reporting facility.

Pricing for UIS-Autostor begins at 65 850

2440 Research Blvd. Rockwille, Md. 20850 (3011258.9620

KEA Systems Ltd. has announced Version 3.0 of the KEAterm series New application integration features are highlighted with this release. KEAterm is an advanced software on of Digital Equipment Corp.'s VT terminais, enabling users to integrate multi-

ple host applications into the Windows Access to text applications on a VAX or Unix host system is provided by KEAterm 420 and KE Aterm 340 allows for accase to host text and graphics applica-

tions, according to the company. Additional features include copy and paste with links that allow users of KEAterm 3.0 to highlight an area on the emulation screen with a mouse and then with a Dynamic Data Exchange (DDE) link, paste it into a Windows application such as Excel. Transmission Control Protocol/Inter-

net Protocol (TCP/IP) Windows Sockets that allow KE Aterm to interface with any TCP/IP stack that supports Microsoft Corp.'s Telent socket standard are also provided. KEAterm supports DDE and has a variety of extensions, including international Standards Organization language support.

A single-user package of KEAterm 420 costs \$245. KEAterm 340 is priced at

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COMPUTERWORLD SEPTEMBER 6, 1993 79

# company that could as about rightsizing, over and open systems, as itself at a loss for words.

moment. Because to win the 1992 IBM and, Lawson Software had to score highest categories used in the Malcolm Baldrige

tist in be areas of leadership, human and management, management of customer focus and satisfaction. All while with full-festured accounting human shall and materials management AS/400° RS/600° and other

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# CAwins over Nantucket users

Users praise CA for accelerated development of the acquisition's products

#### DELANDO PLA

When Computer Associates I national, Inc. acquired Nantucket Corp. in June 1992. George Smith. like many other Nantucket Clipper users, had what he termed "grave

concerns " Throughout its 17-year history, CA had developed a reputation for acquiring software vendors for their tee # s, customer basas and : ance revenue, but

it had a " tly done little to enproducts. hance to Smith, 1 independe tant who is president of the Connecticut Clipper user group, was among the Clipper users who feared that Clipper, an Xbase de-

velopment environment for DOS programs, would gather dust. But 14 months after CA sequired the \$40 million Los Angeles-based Nantucket, the bulk of those fears have been put to rest. Six months ago. CA rolled out a Clipper upde. Release 5.2, which included a complete Novell, Inc. NetWare

rating system interface. Next month, CA will begin bets testing CA-Visual Objects, an obment environment based on tech-



a speedier development cycle because of CA's greater resources

nologies it inherited from Nantucket. Since then, CA has added visual development tools, class li-

braries and SQL access to the Needed help

With greater resources than Nantucket, CA likely sped the development of CA-Visual Objects, according to several early alpha testers of the product, including Smith. "With Nantucket, who knows when we would have seen Visual Objects?" he asked. CA drew criticism last month from a few users who had experi-

ed bugs with CA-Clipper 5.2, including problems with memory management and indexing. How-ever, CA reportedly moved quickly to address the problems and has made three patches to the soft-

ment. Bas early testing of the product, CA-Visual

CA executives said the gittches affected a small number of asser-and have since been resolved. Those claims were backed ap by tion, including William T.Ota, chief executive officer and publisher of Clipper Advisor, a bimonthly magazine for CA-Clipper us published by Advisor Commun "The bulk of the complain

same from a handful of Clipper u ers who made waves over Compa

Tad Prysinger, manager of infor-mation services at Colorado Com-modities Management Corp. in Boulder, Colo., uses CA-Clipper 5.2 and said be has not had any prob leas with the development sys tem. Still, be said be believes CA has moved quickly to eliminate with the software. "CA is doing a crack job of patching things up, Presinger said.

Analysts estimated that CA-Visual Objects will begin shippin by mid-1994, putting the prowell behind the curve for es lished Windows development suites such as Microsoft Corp.'s Vi-sual Basic for Windows and Pow-ersoft Corp.'s PowerBuilder for

Despite the delay, many CA-Visual Objects alpha testers said they are impressed enough with the test

version to wait on a pro-'I'm willing to wait ffor Vist

Objects] because we don't want anything that's half-baked," said Ginny Caughey, a vice preside Carolina Software, Inc., a Wilt ton, N.C., developer of applicati

Caughey said she prefers CA-Vi sual Objects over competitive products such as Visual Basic and

PowerBuilder because she be-lieves CA-Visual Objects has a more comprehensive tool set than the others. She does not want to have to rely on third-party vendors for add-on products "that might not be there when I need them.

'I'm going to hold off and wait for Visual Objects. It's worth the wait," said Craig Yellick, a vice president at Alto MicroComputer ing and development firm. Yellick said he was impressed with CA-Vi-sual Objects' integrated Develop-

ment Environment, which offers a

#### CD-ROM systems

# IBM program to assist OS/2 users, developers

#### Ry Ed Scannell

Hoping to give a much-needed boost to apon development for OS/2 2.1, IBM's Personal Software Products group has formally announced a developer's assistance program, which includes a wide range of tools and services The Developer Connection for OS/2 in-

cludes a technical component of the program that has 400M bytes of code on a CD-ROM with more than 80 development and testing tools and 50,000 pages of on-line technical information. Besides the latest OS/2 2.1 code, the De-

veloper Connection CD-ROM features the Developer's Toolkit for OS/2 2.1. the Multimedia Presentation Manager/2 Toolkit and the Pen for OS/2 Developers Toolkit. Also included is a full-function version of

onal Software Products' Communication Manager 1.0 as well as a browner and search engine to belp programmers more quickly locate specific pieces of code to nection] is to get developers what we be-lieve are the best and latest tools for OS/2 to create client/server applications," said Barbara Britt, product manager for OS/2 development tools.

The Personal Software Products group plans to provide CD-ROM up-

dates four times a year with new or improved versions of existing tools, Britt added. BM's Personal Software

Products has been beta testing the tools during the past year under the name of the Profi sional Developer's Kit. "This set of tools should belo

push some developers sittle on the fence about starting or finishing the Devel OS/2 applications," said Randell Flint, president of Sundial Systems, Inc., which tions to take full advantage of OS/2's Work

Some of the services that are part of the

gram include access to the Develo etion forum on CompuServe Through the forum, developers have ac-

coss to IBM's OS/2 developers to untangle technical problems as well as share

Developere also get a newsletter advising them of Personal Software Products latest thinking on

OS/2 technical strategies. In addition, programmers have access to 32-bit tools for ereating applications for the WorkPlace operating system, the microkernel version of 08/2 expected in the first half

oper Connection CD-ROM are 6M bytes of main memory - although 10 is aded - OS/2 2.0 or later and an OS/2-compatible CD-ROM drive.

Available now, the Developer Connection as an introductory price of \$149. After Nov. 30 the price jumps to \$199.



rch 25th, 1993



THE WALL STREET JOURNAL April 20th, 1993

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# Digital takes aim at Unix tool area

Digital Equipment Corp. is now shipping its Cohesionworx, a development environment for Unix, and Cohesion Team/See, a set of software tools for managing data and development across

These Digital products target Softench from Hewlett-Packard Co. in the Unix tools arens. They offer more effective messaging services than those used by Softbench to coordinate the various development processes through Digi-tal's Application Control Architecture (ACA), according to Tony Picardi, an analvst at market research firm International Data Corp. In Framingham, Mass The big issue for Digital, as usual, will be Its ability to prioritize and focus on the products to get the message out, Picardi

"Team/See offers a packaged way to integrate tools so users don't have to figure it out for themselves, for instance, Picardi said. "[Digital bas] underestimated the number of people who need that and should be making some noise Cohecionwork offers a graphical nece

interface based on IXI Ltd.'s IXI deaktop, which has been extended to incluicons representing Cohesionwork for tools existing on the network. Users can also create work areas and tool boxes to

store data and to support specific devel-



Cohesionwork offers a GUI based on the IXI desktop, which has been extended to include icons nt tasks. Digital officials said

Also available with Cobesionwork are control services via Digital'e ACA Services. These services support messaging or tools, the dynamic addition of tools and servers and execution priori-tizing. ACA is compliant with the Object Management Group's Common Object

bjects across the network.
The following software development

tools are included with Cohesionwork: DEC Puse coding, editing and debugging tools for development in C. C++. Portran and Pascal, with sup rt planned for Ada. The DEC Fuse Code

Manager supports version control and file sharing for develpment teams. In eddition, Cohetopworx EnCASE

supports the integration of new tools with the DEC Puse family. Digital's Cohesion Team/See offers as

interface to invoke tools peross Digital's OSF/1 and Sun Microsystems, Inc.'s SunOS. It include PCMS configuration management soft-ware from SQL, Inc. for tracking the development process - docum specifications, change and control man gement, for instance

track of tasks that require completion, a library finder to manage multiple librar-les, and work-area templates to enable large development teams to better organize their responsil

Optional products, which can be pur chased from Digital and integral

ed with Team include Inc.'s teractive Development Environ-

ment's Software

Vendor offerings boost

through Pictures and Interiest, Inc.'s

Cohesionworx Version 1.0, Co work for C++ Version 1.0 and Cohes work EnCASE are priced respectively at \$2,300, \$1,000 and \$2,400. The prod are shipping now on Digital's Alpha AXP workstations hosting the DEC OSF/1 operating system and on Sun SPARCet tions and SPARCeervers running Sunf Version 4.1.3. They will be available a HP systems running HP/UX in December. Cohesion Team/See is shipping now, and

# Silicon Graphics sharpens vision

By Jean S. Bozman MOUSTAINVIEW, CALIF

Silicon Graphics; Inc.'s (SGI) CASEVision MSHEORI GRAPHICS, INC'S USBY UNDERSTORED WorkShop computer-aided software engi-neering (CASE) tool plays on the visual nature of its Unix computing platform, users of the year-old software package said. Users can trap "bugs" in dialog boxes and spot "mem-ny leaks" by viewing colorful pictures of CPU

Early users of WorkShop 1.0 expect Version 2.0, set to ship this mouth, to provide better programmer productivity through the tight integration of separate programs. "You can run your programs and try to find out where you're spending your CPU time all on one screen," said John Grieggs, a software design engineer at the Jet Propulsion Laboratories in Pasadena, Calif., who saw a beta-test copy of Work-Shop 2.0.

The visual nature of the lower CASE tools is the basis of the developer environment, users said. "It's actually built to be a graphical debugger from the ground up, not just a graphical interface thrown on top of a text-based debugyer," Griegge said. He tests source code on an

Another WorkShop 1.0 user, Jonathan Coker, a senior engineer at McDonnell Douglas Aero-space Corp. in St. Louis, said visual techniques spur efficient coding in flight simulation procrams. The shift from traditional debuggers us as dramatic as moving from a Microsof

Corp. DOS environment to a Windows graphi-cal user interface, he said. He added that he exets tighter integration between WorkSt s to further reduce development time WorkShop 2.0 contains several basic ele

ents: a static analyzer for C, C++ and Fortran languages; a source-level debugger; a perfor-mance analyzer; and a "build" manager. It also has four options: C and C++ interpreters, an yzer for parallel-processing applications nd a graphical test environment. The Work-Shop tester highlights poor performance with visual cues such as colors and sharp "spikes" of elapsed CPU time.

Analysts said SGI built CASEVision in 1991 to provide a tool set for its graphics-oriented Unix machines. "There weren't many third-party tools targeting SGI products," explained Paul McGuckin, an analyst at Gartner Group, Inc.'s Midrange Computing Strategies Service.

"You 'fly' through your program, looking at the size and age of files," he said. It could be need to develop C and C++ code for use on other types of Unix machines, but that is probably not commospiace, McGuckin said.

When it ships this month, the core WorkShop

when it ahlps this month, the core WorkSlop package will be priced at \$2,000. It will also be bundled with an entry-level SOI Indy computer as a developer's workstation, which is priced at \$5,965. The C++ interpreter is priced at \$5,000, the C interpreter at \$1,000, the parallel-

## database flexibility By Melinda-Carol Ballou

In addition to the major C++ an-

nouncements made by Symante Corp. and Microsoft Corp. ICW Aug. 16 and 30), a series of oth roducts revealed at the reco ce may facilitate the application

development process and enhance the ability of users to access infor-

Peet Software Corp. in Santa Clara, Calif., introduced a low-cost version of the company's object tabase system aimed at indi uni C++ programmers. Poet Per-sonal Edition for Windows sup-ports Microsoft's Windows and

dows NT. DOS. Novell, Inc.'s ELM, Next, Inc.'s Next 486, Apple Computer, Inc.'s Macintosh, IBM's OS/2 and various Unix platforms at both the source and binary file format levels, officials said. It is

>Q+E Software in Raieigh, N.C., announced an upgrade to the Q+E Database Library, the company's database management system-in-dependent development tool. The base Connectivity and includes a set of Dynamic Link Libraries that can be called to perform database access functions. Offered with the product are more than 20 SQL and Q+E PC database drivers, a query builder, a data dictionary, a fi function and data conversion tools. Q+E Database Library 2

as on Windows and will su OS/2 by the end of 1983 with Macintosh, Windows NT and Unix sup-

priced at \$600.

ProtoView Development Corp
in Dayton, N.J., introduce SQLView, a visual database access system for Windows that uses the Q+E Library, SQLView offers ac cle and Sybase, Inc.'s SQL Ser le standard database opera turn by column. It is priced at

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# System formation Delivery

# Netron rolls out Caplink

rate developers looking for a way to write network-transparent client/ server applications just got a boon from Netron, Inc. in addition, Netron an-

seed Caplink, a link between its de-pment tools and Bachman Informaon Systems, Inc.'s Bachman/Analyst. Bachman/Analyst records business requirements, and Netron's Cap is an ob-ject-oriented construction tool that lets developers implement the technical design of the application, Netron offic

While Bachman has no em echnical design details, there are no explicit business requirements in the Ne-tron specifications, the Netron officials said. Caplink, the interface between the ates references between the logical design objects in the Netron tools and the usiness requirements present in the

Because the Bachman and Netron tools are independent of each other, de-velopers can change the technical implementation of a system without changing the business model and vice versa. This allows users to separate business remis from the technical design of an application and thus address the same business oceds on diverse platforms without major technical changes.

In its initial version, Caplink offers an interface to Bachman/Analyst that extracts data attribute information from the Bachman product and supplies it to Netron's Cap.

#### Staying with Cohol, CICS oftware Ltd., a Canar

facturer of DB2 software for the life inance industry, recently completed a pilot project using the interface. The developers at the company were already using the Bachman tools. But they wanted to create a client/server appli while remaining in the Cobol and CICS environments, where they already have most of their investment, according to Pat treson, senior vice president of prod-"These tools were a logical extension

of our existing environment rather than being revolutionary," she said. "The ng curve was not that steep . . . and se tools allowed us to do a logical data ation based on business needs

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strictions," lresoo said. This gave Iroson's site grea. ity because many integrated computeraided software engineering tools embed the business requirements into the tech-

nical specifications for the application. For its part, Netron/Connect allows

ions protocols, including Named Pipes NetBIOS, Transmission Control Proto col/internel Protocol, Advanced Program-to-Program Communications, CPIC and CICS LU6.2. It also allows developers to design, construct, test and debug elicot/server applications in

including OS/2, MS-DOS, Unix, VAX and MVS/TSO platforms, according to offi-

Netron/Connect offers design tem ates and eliminates the oeed to know shout the complex, low-level application mming interface coding require ments for Cobol.

Netron/Connect and Caplink to Bach-man 2.0 are symilable new and are priced at \$1,500 and \$2,000, respectively.



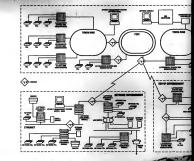
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#### Application Development

**■**SynOptics

Extended Systems has announced the Advantage Xbase Server.

According to the company, the Advantage Xbase Server can improve the mulser performance and integrity of networked CA-Clipper applications without

rewriting any code. The solution consists of a Clipper Re

network management system will meet your needs

It's all part of our commutment to the network

today, and down the road.

asly integrates with existing Cline 5.01 or 5.2 applications and a NetWare Loadable Module that runs on a Novell. Inc. NetWare v3.11 or 4.0 file server.

Advantage Xbase Server prices rang from \$895 for the five-user version to \$7.496 for the 1,000-user version. The Adntage Xbase Server Software Develop er's Kit, which houses everything need to create client/server CA-Clipper appli 5777 H. Meeker Ave. Boine Idaho 83704

(406) 587-7575 italk, Inc. has announced Version 2.0

ts object-oriented progre ronment for the Macintosh. Smalltalk/V for Macintosh features a rtable architecture using a new eventdriven user interface framework that

oject-oriented support for adv nguage/Data Access Manager; full pport for multiple text fonts, styles and re; an object filer for easy ret and sharing of objects between u

alk/V Version 2.0 for Ma **▶** Digitalk

9841 Airport Blvd. Los Angeles, Calif. 90045

Visual Numerics, Inc. has ean Exponent Graphics for X and Exp Graphics for C Version 2.0, which are

both graphics products. According to the company, the prod-nets enable users to increase productivity by reducing up to 95% the time and code required to generate complex data

Exponent Graphics for X includes more than 50 high-level two- and threedimensional plot types used in business

and scientific applications. A library of Open Software Poundation Motif-based phing widgets is provided. Users can customize their graplots with a built-in interactive grag

user interface. Exponent Graphics for X provides more than 180 X Window Sys-tem resources. Exponent Graphics for C Version 2.0 is an interactive graphics is brary for C program.

A single-user license for Expone Graphics for X costs \$3,995. Exp Graphies for C Version 2.0 costs \$3,40

for a single-user licens

Visual Numerics
6230 Lookout Road Roulder Onto 80301 (303) 530-9000

the availability of Multiway, a pr ines a multid base with a fourth-generation lange ized for develops

According to the company, Mult an integral component of its Acc product line. Accumate supports one access to corporate data and offers an environment for data analysis and reporting, data integration and appl

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# Management



**By Candee Wilde** 



data processing at a New Jersey savings specialists jumped from 45% in 1992 to 58%. and loan bank, circuvears ago, most emshe was a man.

"When they called and found out I was a woman, 50% hung up," she recalls. "The dis-

crimination was horrendous." What a difference a decade makes. If

Computerworld's Annual Salary Survey is any indication, things have improved even during the last 12 months.

In our 1992 survey, many women in information systems, especially managers, reported earnings up to 20% lower than those of their male counterparts. Now, however, the tide appears to be changing - and dra-

matically. Women are starting to close the gap between their earnings and the higher sums typically paid to their male colleagues (see chart page 1).

Overall compensation for 1,239 IS professionals polled rose a modest average of 4% this year. Pay for some positions, including chief information officer, rose a bit more. Others did less well. In a number of companies, bonuses, not pay raises, have become the favored reward. On average, women still earn less than men for similar jobs.

But the rapidly expanding ranks of moreexperienced women seems likely to change that. This year's poll showed unmistakably that females are moving into more responsible, higher-paying IS jobs in far greater numbers.

As local-area network managers, for inhen Revell J. Edelman, stance, women hold 42.9% of the positions, now vice president of compared with 31% last year. Similarly, the percent of women serving as PC end-user

"The biggest change we've seen is since lated her resume 10 the Clinton administration has come in, there has been a new emphasis on minority plovers assumed that and female recruiting," says Jay Gaines, president of Jay Gaines & Co., a New York-Gap narrows, page 94

CETT PLANS

POSITION	1992 PERCENT	1993 PERCEN
Description systems	65	586
LAS manager	325	CK.
Sorter systems analysis	63%	72%
Discon manger	375	405
Service of the service of	- 25	THE PERSON NAMED IN

TO TELL A EAL NODE **FROM A** WANNABE NODE, REA THE LABEI

# INTRODUCING PCs DESIGNED SPECIFICALLY AS NETWORK NODES.

(And you won't pay through the nodes either.)







It's quite simple. If it says Dell' NetPlex," it's a real node.

Dell's new NetPlex systems are PCs designed from the ground up to be network nodes. The result is a far more cost-efficient node, remarkably free of set-up and maintenance bassles.

Works with your budget as well as with your network. The cost swings up forar are constantled. Our node itself is priced below companishe PCs offered by our compertions. And we save you time and resources by thoroughly breing NeePiles for network compatibility and then factory intendiling your choice of six industry standard network interface cards. Well also any NIC diagnostry stoy. And set jumpers. And intell your choice from 100 of the most your factories productions. All this, accomplished with one PCs.

We've also made our NetPlex systems remarkably resistant to future shock. So six months from now when your users are demanding even more power in their computers, our PCs will be happy to accommodate them. All systems can be upgraded using Intel's powerful 1866" Overdrive" processor. You can expand up to 32MB of memory. Or add a high-resed SRAM cache.

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With Dell, you can pick and choose from a full memo of service options. We call is our Select.Cure." program. You may prefer the obsessively attentive 4-hour on-site servicer option. Or you may elect the highly responsive plan for self-maintainers. Likewise, you may want coverage for 5 years. Or you may settle for just one. The bottom line is, you pay only for the service you want, exactly as you want it. And not a penny for staffly out only want one.

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help within five minutes, 24 hours a day, 7 days a week. Try finding that kind of service anywhere else. And since you deal directly with Dell, you get convenience and responsiveness other PC owners only dream of.

#### No dummies here.

Let's just get one thing straight here. Because we've made a node doesn't mean we've made any less of a PC. These are true highperformance business muchines. Companable to any of our major competitors' offerings. With block mode IDE transfer that makes for a veritable data rocket. And with local bus video performance thank on correcting fast evound.

What about reliability, you ask. Well, we've received top ratings in polls by both Dataquest" and Reliability Ratings. And we've won virtually every major customer satisfaction poll we've participated in over the latt five years.

So call Dell and get yourself a real node. Not just some PC masquerading as a node.



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was to be found in familiar by Baladiny Sealing, Sealing, Marian Mr., The data young laws of the part of the part



## Gap narrows

CONTINUED FROM PAGE 91

based recruiting company. "Previously, the emphasis on those themes was more muted. Now we're gettings lot of pressure from clients for this type of hiring."

IS remains a strong male bastion, though: Two-thirds of those polied were men, a pretty decent representation of the computing population at large, Still, the tread toward more gender-balanced dopartments is underiable. Take Coismbia Savings Bank SLA in Fair Lawn, N.J., where Edelman works. "My department is run by women," Edelman save.

Benefits preferences tell part of the story. Traditionally, men held many high-level posts because. Edeleman and others note, women didn't want to work the "eraxy hours" associated with the jobs. Some women say they feel that accounts for their historically lower

Our poll found that hasn't changed too much: Many women said they preferred more regular hours. They also were more likely to take advantage of floodble-time programs or part-time work.

Days of mega-raises gone
While fortunes varied from positions, industries and regions, few
are getting clubbed or starred this
year (see charte this page). Gaines
says that doesn't necessarily
mean IS can start looking for befly
bonuses and compensation hikes
like in the old days.

"The ongoing themes are re-engineering and streamlining, and that means companies are going to run significantly leaner," Gaines said.

Other experts say continued corporate downsizing remains a hig threat to 18 pros, especially those who don't stay current with rapidly developing technology.

A notable bright spot is CfOs. Technology bosses enjoyed a 2.5%

Technology bosses enjoyed a 2.5% hike, a stark contrast from last year's 3.5% decline. Many recruitors report CiO recruiting has surged in 1983 after several lackluster years.

A strong enterprisewide focus

A strong enterprisewide focus of many basinesses has kept top CiOe in "strong demand," says John A. Challenger, president of the Chicago-based recruiting firm Challenger, Gray & Christman, "Companies are looking for the very top people in the field who can work cut their information needs and implement them affectively," he explains.

At the other end of the spectrum, help desk operators (where wom-





attaced downstring has rekindled a sai American tradition among black incrition and others in IB: casting out

on your own.

Fower jobs and slower compensation
growth have prompted many—especially sealor, highly paid corporate its concitives—to start their own consultances
according to George Williams, nationa

ng Associates (BDPA).

"A lot of top people are being downaized," Williams
aid at the 2,500-number group's amusal convention.

m names crise, so, ses source. Anno consections; their only opportunity is to start a consultancy."
Williams and other attendees agree that, in general, the continued shrinkage of companies has provided an unrestoome water-up cell for everyone in 12, in-

chuding top veteran managers.

There in (job) shrinkage," agrees Roger Dunn,
president of the New York BUPs, chapter. "It's the un
dertow of the wave of technology." Even those not di
matter distribute the demonstrate face. It is not ex-

recity affected by downsizing fear it, he says.

Rathes have also come more slowly in recent year

BDPA numbers note. "There's a factibility it someon
is good, or they have nemority or they've adaptable,
anyo one Midwest consultant who does not wish to it

raise for several years.

To remain on the corporate payroll, information technology professionals need to be vigilant about corporate plans, attendees agree.

"It's so critical to be in the driver's neat in your or reers," anys Linda G. Gooper, prevident of LLOG A hasociates, a KannacOlfy drovally consulting firm. "I should always be ready so that you don't get blindsided." She adds that EP professionals should take t initiative to get more technical training—even if the

Another way to combat that from is to manter non skills for olient/server computing, says BDPA President Diane L. Davis. Cobd programmers were encoaged here in learn Unix, C and object-oriented programming.

The Washington, D.C., organization, founded in 1976, has a national database of hundreds of result to document members' skills to potential employee en outnumber men) suffered a painful 8.9% drop in pay. Experts differ on what the dip means.

Larry Kane, president of Altsrnative Resources Corp. in Lincoln shire, Ill., note the dramatic rise in the level of expertise and the levcl of assistance help desk operators are expected to provide. He considers it one of the faster-growing positions in the IS field, so he's puzzied.

It's possible, he says, that many help desk operators may have failed to keep up with technology development. Thus, their sakers feld. Last year, help desk operators carned an everage sakers of \$30,873, with average additional compensation of \$1,040. This year, average salaries dipped to \$27,200, with the typical bonus failing to \$800.

Scott Novey, manager of microcomputing and communications at Soin Optical, inc. in Petaluma, Calif., reports that salary increases at his company reflect this trend. In the past, Soia Optical's IS employees had been at the "higher end of the pay seale," in says.

"The company has elected to make itself more mainstream and position itself more in the middle of the pay range. Consequently, merit increase percentages have been declining slowly." he says.

Bonus babtes

Solo Option offers two bosus programs: One uses a formula based on the company's profit level and the employees' salary, while to other, for managers, is "goal-oriented," he explains, based on the degree to which a manager meets a set of objectives established with a supervision.

Kristyn Gomes, an MIS supervi



and DELECT showed healthy salary increase for many jobs, including



in those cities, pay for some jobs netranily fell this year. sor at Calcitek in Carisbad, Calif., says her company has developed a salary matrix based on job points, which are awarded during an annual performance review with a

supervisor.

"This way, you can see how you're in line with other people with the same number of job points even if they don't have the same inb," she same "Overall, our comitob," and same "Overall, our com-



and SECURIES firms took the biggest pay life this year.

INSURANCE companies showed the biggest increases for every

pany has good benefits packages, and the opportunities they provide for advancement for women and expanding my technical knowledge are really good."

edge are really good."

Sarah Reidy, computer systems
manager at the nonprofit Population Action International in Wash
lagton, D.C., also praised her com
pany's benefits package hat was
less optimistic about the position
of female manager.

of temate manager.
"Sometimes, I'm not taken as seriously as my male counterparts,"
Reidy says, It takes porseverance,
she says, just to get the information she needs to do her job.

For those who persevere and excel, bonuses have become the preferred tidbit.

Electrogias in Santa Clars, Calif., illustrasies a trend popular among smaller companies. Botusca are tied to company profits and an individual's performance, according to 4. B. Shah, the company of sirector of MiSVelecommunications. Bosusses give employees the chance to enhance the modest salary increases—38 to 5% — of the post few years.

the past few years.

That policy is echood by the survey. Most respondents say they believe that salaries for their positions are no better elsewhere Many say they feel bonuses about he the true vehicle of compensation to the feet and the salaries and the salaries feet and the salaries are salaries.

tion for superior work.

Thus Edeiman and other women are opting to stay put, convinced that the cash isn't necessarily groener elsewhere. Stay tuned.

Wilde is a free-lance writer based in Factor Corn





# LAN READY, SET, GO.

It can, shall we say, take a little, uh, extra time to, you know, get your typical PC on the, uh, network.

Well, Dell's new NetPlex<sup>3</sup> systems are not typical PCs. They're true high-performance machines that are also network nodes through and

	SET-UP TIME OF A D	EIT MODE.	
	Open System Chassis	N/A	through:
	Install NIC ·	Done by Dell .	Desig
	Configure NIC	1 Minute	and runn
	Run Diagnostics on NIC	Done by Dell	
	Other Software Configuring	3 Minutes	network i
Close System Chassis	N/A	or less.	
		4 MINUTES	Luca .

Designed to be up and running on your network in five minutes or less. Just ask, and we'll

gladly take care of the more monotonous, time-consuming setup chores for you. Like factory-installing network interface cards. Running NIC diagnostics. Installing your software. And setting jumpers.

We even made it easier to access your system set-up utilities — with a simple CTRL-ALT-ENTER. Rather than the yawninducing process of rebooting your system to load the system set-up from a diskette.

So give us a call to order your nodes. Or, uh, who knows, uh, what you may have to, uh, go through?





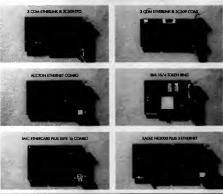
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care taken to see that you avoid the usual hassling and tweaking.

Call us to order your Dell NetPlex systems. You won't find
an opportunity like this anywhere else.



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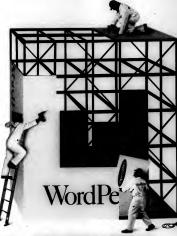
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Contact: Digital Consulting, Inc., Andover, Mass.

Second IEEE Network Management and Control Workshop, Tarrytown, N.Y., Sept. 21-23 — Contact: Hart Rasmousen, Workshop/Tutorial Reg-

istration, CATT, Hawthorne, N.Y. (914) 347-

Expo '93. New York, Sept. 21-23 - Contact: Breno Blenheim, Inc., Fort Lee, N.J. (201) 345-1400.

et World '93. Hartford, Conn., Sept. 23-23 - Contact: Key Productions, Inc., Hartier Cour. (200) 247-8363.

ociation of Barryan Users International Hosts Conterence and Expo. Ottown, Sept. 26-29 --Contact: Association of Banyua Users International Chicago, IL (312) 644-6510.

OPSLA '99: Conference on Object-Or mming Systems Languages and Applications. skington, D.C., Sept. 26-Oct. 1 — Contact: As-N.Y. (212) 869-7440.

t5 es a Service Organization, Columbus, Ohio, Sept. 27-25 — Contact: Ouellette & Associates, Bedford, N.H. (608) 629-7372.

imaging Expo. New York, Sept. 28-30 — Contact: Comtek International, Witton, Comp. (200) 884-

#### OCT. 3-OCT. 9

The Minth International Congress on Advances in Hontespack Printing Technologies/Japon Hardcopy '93. Yokobama, Japan, Oct. 4-8 - Conta The Society for Imaging Science and Technology, Springfield, Va. (763) 642-8660.

Networld '93. Dallas, Oct. 5-7 -- Contact: Bruno Blenheim, Inc., Fort Lee, N.J. (201) Se6-1400.

#### OCT. 10-OCT. 16

Dasign/West, Anahelm, Calif., Oct. 10-12 — Con-tact: Karl Steid, Reed Exhibition Con., Stam-ford, Conn. (200) 994-0000.

14-15 - Contact: Belloure TEC, Links, III. (705)

Hyperius '93. Scattle, Oct. 14-15 — Contact: Association for Computing Machinery, New Yuck, N.Y. (212) 889-7440.

ogy Werkshops '93. Boston, Oct. 15-17 — Con-tact: Trish Griffin-Silva, Darstech, Inc., Cambridge, Mass. (617) 354-2339.

OCT. 17-OCT. 23

OS/2 Professional interchange Conference. Palm Springs, Calif., Oct. 17-29 - Contact: OS/2 Pro-Institutel, Reckville, Md. (203) 261-6227

Scan-Tech '93. Philadelphia, Oct. 18-21 — Con-tact: Scan-Tech '93 Registration, Ventura, Calif. (800) 228-1064 mg, 117. Advanced Application Development Technology Conference & Exposition. Boston, Oct. 18-22 — Contact: Digital Equipment Corp., Andover, Mass. (105) 479-3590.

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# In Depth

PETER

Have you ever been in a car accident? Time seems to slow down as you realize DE JAGER you're going to crash into the car shead of you.

It's too late to avoid it - you're going to crash. All you can do now is watch it happen.

The information systems community is heading toward an event more devastating than a car crash. We are heading toward the year 2000. We are heading toward a failure of our standard date format: MM/DD/YY.

Unfortunately, unlike the car crash, time will not slow down THE COST FOR for us. If anything, we're accelerating toward disaster

PROGRAMMING TO ADJUST ALL SYSTEMS FOR THE YEAR 2000:

This is a good news/bad news story. First the bad news: There is very little good news. There is no way to avoid the fact that our information systems

\$50 BILLION. are based on a faulty standard that will cost the worldwide computer community hillions of dollars in pro-

gramming effort. Perhaps more importantly we are going to suffer a credibility crisis. We and our computers were sup

The date change in the vear 2000 - anevent that may trigger fatal errors in

mission-critical systems - is only 2.308 days away. Many IS

people are unprepared or unconcerned.

sed to make life easier; this was our omise. What we have delivered is a ca-

The problem is twofold: THE COST WHEN the date issue itself and. more importantly, our re-luctance to address the YOU ADD DESIGN MANAGEMENT, NA WARE, SOFTWARE

Problem ID

What exactly is the "problem"? To save storage

space - and perhaps reduce the amount of keystrokes nec sary to enter a year - most IS group have allocated two digits to the year. For example, "1993" is stored as "93" in our data files, and "2000" will be stored as "00." These two-digit dates exist on millions of data files used as input to mil-

lions of applications. This two-digit date affects data manipulation, primarily subtractions and parisons. For instance, I was born in 1955. If I ask the computer to calculate how old I am today, it suhtracts 55 from

93 and announces that I'm 38. So far so good. But what happens in the year 2000? tract 55 from 00 and will state that I am -55 years Doomsday, page 108

AND SUPPORT

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## **TOOLS FOR 2000**

sday, from page 105 old. This error will affect any calculation that produces or uses time spans, such

as an interest calculation. If you have some data records and want to sort them by date (e.g., 1965, nce would be 1905, 1965, 1966. However, if you add in a

date record such as 2015, the computer, which reads only the tast two digits of the date. sees 05, 15, 65, 66 and sorts them incorrectly. These are just two types of PROGRAM.

raiculations that are going to oduce garbage. There are others. The task facing us is to identify and

correct all the date data and check the integrity of all calculations involving date information. We must correct the data residing in all data files or write code to handle the problem.

The starting point How do we identify the problem data and

risted calculations? We have few; if any, standards for labeling data used in date calculations. The only choice we have is to examine each line of code and make the necessary changes.

One IS person I know of performed an internal survey and came up with the following results: Of 104 systems, 18 would fail in the year 2000. These 18 missioncritical systems were made up of 8,174 programs and data-entry screens as well ome 3,313 databases. With less than seven years to go, someone is going to be working overtime

By the way, this initial survey required

t0 weeks of effort. Two weeks just to identify the problem areas

How many systems do you have? How many lines of code do you have in your organization? How many data files? How

many maintenance programmers?

The problem extends beyond mere calculations and AVERAGE TIME into the I/O processes of ev-MEEDED FOR ery application. Can you en-ter 2000 into your data **CODE 2000:** screen, or can you enter only 7 DAYS PER two digits, forcing the input ports print four digits? The crisis is very real at

tially very costly. Ken Orr, principal at the Keo Orr Institute, and Larry Martin, president of Data Dimensions, Inc., estimate that Fortune 50 orga will each have to spend about 35 to 40 cents per line of code to convert all their existing systems to accept the change from the year

1999 to 2000. That translates into about \$50 million to \$100 million for ALL SYSTEMS: each company. The mind borries at a maintenance problem with that price tag. And the costs could be even higher. "The truth is, until we work through a com-

plete cycle with some large organization we are not going to really know," Orr I have spoken at association meetis and seminars, and when I ask for a show of hands of people addressing the problem, the response is underwhelming. If I get one in 10 respondents, I'm facing an

alightened group. Typically, all I got are saickers and seots each as. I won't be in this position or this company in the year 2000. It's not my problem.

nity is the real problem. It is very difficult for us to acknowledge that we made a "little" error that will cost companies millions of dollars. It is also a "pay me now or pay me later" situation.

"We in the IS industry have not been paying our way," says Gerald Weinberg ther of Quality Software Manage ment and winner of the 1991 J. D. Warni er Prize for Excellence in information Science, "We have been building up a 'national debt' just as surely as the U.S. has been building up a money debt. It will be paid by our children - our successors one way or another." Weinberg says. We don't have a choice. We must star

addressing the problem to-**TOTAL PROGRAM** day or there won't be enough time to solve it. MING TIME FOR tus quo means apalica tions that will produce eningless results in th

cinberg says he be lieves this procrastination is an indication of deep management malaise.

neering managers cannot manage a change that they've had 1,000 years to prepare for, how can we expect em to manage a change that hap bout notice? In other words, if this change causes a crisis in your orgation, everything will cause a crisis is your organization - and often nothing

## **Bearings firm goes on offense**

LORY ZOTTOLA

have time for seers prodicting dire conseque when the final tick of the clock strikes a change to the year 2000. That's because this bearings manu og company, a division of Ingersoll-Rand Co., is too busy doing some

In 1991, at the suggestion of an empi ee and as part of its drive toward total ality management, Torrington coorened a seven-member team, headed by programmer/analyst Bob Hartman-Berrier, to tackle the century date change issue. The Torrington, Conn.-basedcompany knew that because certain of its grams stored dates by their final two

digits, a changeover to the year 2000 could mean fatal errors that might throw its global systems into an uproar The group brainstormed about problems areas — the company has a mix of mainframes, minicomputers, PCs and local-area networks - and interviewed

husinesspeople throughout the firm. Members took an inventory of in-hou

and outside software products. They nent a questionnaire to Torrington's 90 wandors (30 mainframe and minicomputer, 60 PC) to gauge product support for JUST DO IT

four-digit years. Vendor responses were encouraging: Of the 90% mainframe and 60% PC vendors that returned the survey, nearly all of them either could acco century date or had fixes in the works.

votete to 12 to 16 months.)

The in-house inventory showed that

30% of Torrington's programs and 25% of its files and databases required changes. Hartman-Berrier says. At 25 hours per program and 40 hours per database file to reformat, unload and reload, the team

#### In Depth: Doomsday

will cause a crisis.

The inability of the industry to even think about such a project is troublesome. "No one wants to step up to the is-sue — not [18] management, not the vendors, not the industry gurus," Orr says. "As with all legacy systems, this problem ls messy, expensive and unromantic. No one wants to go in and tell management they have a multimillion-dollar requirement just to keep the business running and that they really have no options."

The reason nothing is being done, says Capers Jones, chairman at Software Productivity Research. Inc., is that the software industry isn't used to taking longterm preventative steps. "I expect that most companies will not start worrying about the problem until 1909," Jones says. "For some, this will be too late."

Now the good news

There is good news. Object-oriented systems may be able to belp. Paced with the buge maintenance costs of fixing their systems, firms may opt to rewrite systems from scratch using object-oriented ming techniques. Tom Love, BM vice president of the Object-Oriented Group, is a proponent of this theory. Some companies are unveiling testing and inventory tools that may ease the identification of trouble spots.

Others are hoping that bombarding eople with inform stion is the best remedy. To that end, William Goodwin in Brooklyn, N.Y., publishes a newsletter entitled "Tick, Tick, Tick," which brings together people in the IS industry concerned about the impact of the year 2000. But is the warning falling on deaf ears?

cts the work load to be beave Costs have been a little trickier to pin-

point. While Hartman-Berrier says worst-case costs to revamp systems could reach \$3.5 million, the best-case could be one-tent b that figure.

Hartman-Berrier and Ken Even, man ager of corporate support, besitate to commit to a number on project cost because of the firm's move to a distributed setup, "Distributed systems may mean we remove some applications, keep others. If we remove a system, we don't have to change it, reducing our labor efforts



The Torrington 2000 team: (front): Traci Winesar Alison Austett, Evelus Palazzini; (back): John Draghi, Bill Beyer, Bob Bouchard, Hartman-Berrier

and resources," Hartman-Berrier says. "We can take a felt-tip marker and strike programs and files from our list."

His advice to other IS professionals is to "plan, plan, plan and act, act, act." The year 2000 is coming.

TICK, TICK, TICK

"I feel like a lone voice crying in the wiless." says Brian Pitts, one of Good win's subscribers and project manager at Berry Co. in Dayton, Ohio. "Current onomic conditions are making this oblem more difficult to address. Management is focused on short-term results and is placing long-term negative conseces on the back burner

The next seven years will be filled with dire predictions. "You are going to be-come very, very tired of miliennium

moaners telling you that your software will fail as it enters the new milleanium," says Nicholas Zveginizov, publisher of Software Maintenance Heuse. "But be patient with them. There really is something to be said for them."

De Jager is an industry speaker on the topics of change, creativity and management of tech-nology. He can be reached at (416) 702-8706 or via CompuServe (70611 2570) and NCI Mail (PDEJAGER).



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down in the halls. No phone tag, just the easiest way ever to plan a meeting.



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For starters, Organizer uses existing ccMail directories to simplify installation. Invitations can be sent to anyone on the network even if they don't

# **Computer Careers**

## Survival strategies for the contract programmer

Basic one-person shops. They find work and do it alone. Independent programmers can work through brokerages - most of which prefer to be called consultancies - and become brokered independents.

#### red independents

Independent developers paid per project by brokers who find clients for them. Neither the true nor brokered independent situation

#### offers many benefits or job security Brokered employees

Full-time employees of a brokerage These employees are paid a salary whether or not they are working on a project. They spend most of their time in client companies and enjoy the benefits of developing in different environments and industries without the financial risks of going it alone.

TRACT ARRANGEMENTS: By Joe Panepinto

IT'S INEVITABLE. Whether by necessity or choice, a software developer or programmer will spend some career time outside the comfort of an in-house information systems department. But before you hang out a shingle and go to work as a contract employee, there are a number of things you should know.

A career as a contract programs gardless of whether your services are brokered, has a number of require ments. Most experts in the busi agree that you need a minimum of three years of hard-core programming and de-

Once you're on your own, you're als ible for your own technical training and tuition, says Ray Rauth, vice president of Independent Computer Con sultants Association, an industry organi retion in St Louis

#### Marketable skills

Hot skills for contract programming in-cinde client/server relational database agement system experience with products from Oracle Corp., Sybase, Inc. and Powersoft Corp. There is also a growing but still niche need for C++ Isn-

Experts, however, are split on the mefits of specializing. A specialized skill such as C++ may call for a higher er a much wider geographic area to find work. "I've seen people specialize in all sorts of things — vertical or horizontal markets, a particular technology, what-ever," says Dheeraj Khera, a contract rogrammer and president of Khern communications, Inc. in Rockville, Md.

## Gaining expertise Many programmers gain experience and

credibility by working through the ranks at software firms that, for one reason or

another, no longer need their services. For instance, when Microsoft Corp. bought Pox Software, Inc. in Toledo Ohio, last year, it moved operations leaving a slew of FoxPro pro behind. The former director of technic support at Fox, Howard Moskowitz, to advantage of this and created a const

ing and contract programming firm -HJM Consulting — specializing in Fo HJM Consulting has three full-time Po ogrammers on staff and another five to seven specialized and senior Pox prommers available on a contract basis

Panepinto is a free-lance writer in Amburst.





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114 COMPUTERWORLD SEPTEMBER 6, 1993

# **PROTECT** yourself

For now, the contract employment industry conforms to few regulations. Be sure you can live with the restrictions.

By James Duly

If you're ready to give contract work a try and are thinking of working with a contract labor firm, choose carefully. Some employees say certain agencies can be

In a speech to the Independent Computer Consultants Association (ICCA) earlier this mouth, high-tech anthor Alan Canton described a whole bost of abuses by so-called "body shops," the agencies that address the growing need to ptace engineers and programmers in shortterm positions.

"Can you insegine an agent coercing a recently isid-off engineer to sign a contract saying he can be terminated without notice, hat he can't quit the project for any reason without paying the agency a large dollar amount as liquidated damages?" Canton asks.

Canton, the Sacramento, Calif-based author of ComputerMoney: Making Serious Dollars in High-Tech Consuling, also warms about the clause that says the agent won't pay the contract em-

sig, also warms about the clause that says the agent won't pay the contract employee until, when or if he gets paid. Brokers deal with independent contractors on an hourly rate for a fixed con-

tract length. They make their money by matching independent contractors with clients and taking a cut of the contractor's pay, usually anywhere from 20% to 50%. Although some brokers are monand-pop outline with four or five people, some of the larger brokerages contract with more than 220 numbers.

#### Policing the market

Canton says federal regulation and licensing would keep the unscrupulous characters out of the business as well as provent abusive, restrictive and unethical practices. It would also provide a forum for receiving disputes that is quicker and cheaper than the courts. Free-lance software and hardware

consultants say they've learned to live with the sword of Damocles hanging over their head.

"I was always nervous about challenging employment clauses because I figured I'd lose the work," says Mike Lips,

With a constricting economy and a de-

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ured I'd lose the work," says Mike Lips, who worked as an independent software consultant for nearly 15 years in San Francisco. "Most agencies figure that if you don't sign the contract, they can find someone else to fill the noxition."

cline in the number of full-time jobs, the market for contract software and hardware programmers is booming. David Arie, a director at the Northern California chapter of the ECA, estimates there are as many as 200 temporary agencies in the San Francisco Bay area alone, up from only a few dozen several years.

ago.
"It can be a very restrictive business,"
Arie says. "If a temp doesn't have any
counset and all they are looking for is a
job, they can really get stammed."

Dog-ext-dog Brokers claim self-defense. "A business has to operate on the philosophy that it needs to make money, and some of the measures are self-protective," says doanne Peterson, president of Abster Information Services, inc., a temporary services agency in Pittsburgh. "But they hould be able to do that in some cariner Arie says that contract work has become more difficult since ble Implementation of Section 1706 of the Tax Reform Act of 1806. Section 1706 it spherose that the rules about what kind of work constitutes free-lance programming. If an employee does not meet the strict definitions of Section 1706, the employing client could be label for withholding tax-es and benefits. As a result, temporary amencies have mushroomed.

While Canton says body shops have a place in the employment picture, he believes people are too dependent on them. He argues that it is not that difficult to find your own client and avoid the need

for agents.
"There is big money to be made brokering peopts," Canton says. "That's why there are so many agents." Full-time employment agents must be licensed, and Canton asks why the same requirement does not apply to temporary



Watch out for employment agency cor with classes that heady the following: services until the pro

Contractors may not voluntarily terminate services until the pro-

Contractors may be liable for Squidnied damages between the determination and the end date of the contract to compensate the sker for lost commission.

of termination and the can muc of the contract to compensate the broker for lost commission.

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Cadre Technologies, Inc. 85 Canadian Imperial Bank of Commerce. 16 Canadian Com. 71	18M 1.6.8, 16.20.37.49.43 51.83.67.70.71.79.81.85,126,136 Information Builders, Inc. 71
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Cadre Technologies, Inc	Information Management Co
Canadian Imperial Bank of Commerce	Informix Software, Inc
Candie Corp	Insta-Care Pharmacy Services, Inc
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Capseo Software Ltd	Intergroup Healthcare Corp
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### A long, strange trip

Mobile dain/lax modem maker Megahertz Corp. (MEGZ) is positioned for rapid growth, according to several Wall Street firms. The Salt Lake City company announced record

Street true. The Sait Label by company announced record revenue and carnings in the quarter cading June 30. It has taken a strange road to success, however. Founded in 1985, Megahertz entered a reverse merger in 1986 with Vector Development, a small public company with a "penny stock," according to David Spafford, Megahertz's

concentive vice president.

Not make hyperic can be extended to the combination. By 1698, Not make hyperic can person company was higher to be a second of the company was present to the company was present to the company was present to the company of features substitute.

The company's features finally improved. By last year, Megabertz was significantly outperforming everything else in Vystar's code may be obtained to the company of the

in lyStar's odd mix of hoofdings, which also included an ei-conditioning enhancement manufacturer. VyStar, Its own stock wallowing as low as 3, decided to shed some dead weight. Seilling of life other properties, Vy-Star underwent a 2-hor; stock spill; chainged its name to Regalectric Orn, including the Regalectriz obstidator's man-agement team stop the whole corporation and made a new public offering with a share value of 13.

"The corporate structure is very clean now," said William K. Woodreff & Co. analyst Vernon Essi, Merabertz shares

bave jumped to over 18. - Derek States



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# **Computer Industry**

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9,000, or \$.01 per share in

HORT TAKES Larry Michels, ormer president, chief ex-cutive officer and chair-um of the Santa Cruz Option (SCO), was named red from SCO amid I...Cayman System e. appointed Brad Noblet president and CBO. He reirman.... Richard P. cer at Thinking erly president and CBO of C:Mail. Courtot replaces aci S. Pitner ... Paul erd was named chair of Aldus Corp. Still

antee Corp. promoted El-n W. Taylor to executive ce president and general anager of Peter Norton

ting general manag-

# Flying solo, CDS now flying high

But Control Data Systems must wean self from mainframe revenue

With four profitable quarters behind him. Control Data Systems, Inc. President and Chief Executive Officer Jim Ousley can justifiably breathe a small sigh of relief. But he better not relax too much.

Data Systems revenue streams away from proprietary mainframes - currently 38% of total revenue and to instead have virtually all revenue come from open systems sales, systems integration services and consulting by 1995.

Ousley's guidance Since its spin-off more than a year ago [CW, June 1, 19921 from Control Date James E. Ossiley Corp. (CDC) - since re

has prospered under Ousley's oft-praised pragmatic" strategy of refashioning the company into a business focused on remarketing open systems platforms and offering systems integration services in the areas of manufacturing design, network communication and database manage-

On the open systems front, Control Data Systems currently markets platforms from Silicon Graphics, Inc., which took a 10% stake in Control Data Systems in 1992; Sun Microsystems, Inc.; and, in a deal inked in month, the entire line of workstation and server products from Hewlett-Packard Co. The company also sells NEC Corp. super-

More recently, Control Data Systems bas shifted its focus to address the second half of Ousley's strategy: angmenting high-endoriented systems integration expertise with PC local-area network know-box

through acquisitions and lessening the company's dependence on mainframebased rever Control Data Systems recently conclud-

ed a \$22 million acquisition of LAN integrator Evernet Systems, Inc. and expects to finatize its purchase, for an as-yes ounced amount, of \$50 million Cana-Not with a stated goal to shift Control disn integrator Antares Electronics, Inc. this quarter.

Evernet's experience in multivendor network Integration, combined with Control Data Systems' experience with complex enterprise systems, will create a new Control Data Systems abic virtually all hardware and soft ware platforms, said Arnie To-

mamo, an analyst at international Data Corp., a market research firm in Framingham

named Ceridian - Control Data Systems s competitors — IBM, Digital Equip ment Corp., etc. - Controi Data Systems has given up its own hardware line and therefore does not have a vested interest in pushing one kind of integrated solu-tion, according to ana-

> eks on the rise In response to these moves, Wall Street bas

npany kindly, send ing its stock price up 35% to 50% - to just over \$12 - since the first day of trading.

joint development

when the market closed at 7. "Long term, I think [Wall Street] needs eight quarters of profit . . . and I think we will do that," Ousley said. By Control Date

scrapped it following the OEM deal with In addition, the pact allows for future

evoted partner The deal with NEC means NCR is now focused on developing its notebook products

with partners. NCR's current low-end mod-el, the 3150, is a product of an effort with The Samsung Group. Nicole Kelly, director of marketing at NCR, said NCR will use this relationship to target future low-end prod-

Analysis called the move pragmatic on

quarters before the spin-off, it would have posted a \$175 million loss, with \$130 milli iated with restructuring charges. In the four quarters since the spin-off, the company has posted not earnings of \$15.8

Yet industry analysts pointed out that profitable quarters do not a husiness make. That is, while Control Data Systems has clearly cut operating, marketing and research and development expenses, is it attracting new business beyond its 1,900 or no existing Cyber sites? "The question is. are they in a harvest mode, getting busi-ness from their installed base?" asked Thomas Willmott, a vice president at Aber-

Despite some successful forays into oth sinesses, the fact is that Control Data Systems has not entirely left the past behind. It has not shed its reliance on propri etary mainfrance, the business that al most destroyed parent CDC, which lost

more than \$1 billion in the 1990s. About 40% of Control Data Systems Since spinning off from Ceridian a year ago, Control Data Systems has posted four profitable quarters revenue still comes from its remaining Cyber mainframe cust

that most of that 40% is we'll nell very few ma frames in 1994," be add ed. For now, the compa

Suo ny's margins are "in the high 30%," according to

Ousley, who poted that his business model calls for the company to be profitable with a 35% margin coming mostly from open systems sales, software and consulting. This pares with the 50% to 60% gross margins Control Data Systems once enjoyed on

## NCR/NEC union signals trend

By Michael Fitzgerald

NYR Corn's announcement of a notebook

OEM deal with NEC Corp. last week not only pads NCR's laptop line and heightens NEC's visibility in the note also signals consolidation in the portable

NCR is relabeling NEC's high-end Ultralite Versa as the NCR Safari 3180, replacing the NCR Model 3170 as the high end of NCR's portable line. The 3170 was discontinued in July. NCR had been developing a the part of both company After ATAT purchased NCSL the com bined companies had problems brings new notebooks to market in a timely fashon, analysis said. "NCR has done not

books successfully, especially at the high end, but had fallen behind, so why should it waste expertise on things you can just as easily get someone else to make?" asked David Coursey, editor of "P.C. Letter" in San Mateo, Calif.

NEC, which has seen its U.S. and Euro pean fortunes flag in recent years, gains a broader marketing presence for Versa.

This deal gives NEC volumes," said Jelfrey Honning, an analyst at BIS Strategic Decisions in Norwell, Mass, "NEC needs to



## Tech trivia



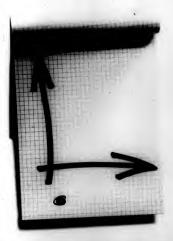
## Great names

Source: World Match, The Delphaye Group: The Computer Museum, Boolen.

WHAT'S THE BREAST LIE YOU EVEN TOLD YOUR BOSS AROUNTOUS STITIMEN' WE WANT TO RHOM. CONTACT LOW!). IF WE USED YOUR COMMON, WI'LL SEND YOUR GET.

#### The 5th Wave by Rich Tennant





# On The Excitement Scale, Where Does Managing Data In A Client/Server Environment Fall?

Okay, we'll admit data management lacks the sex appeal of GUIs and LANs. But we know how important it is to building successful dieribever applications. In fact, the way you manage data ultimately determines both the integrity of your information and its analabitity. And airly butting accurate information at your user's fingertys what client/server is all about?

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